



## Raising Open and User-friendly Transparency- Enabling Technologies for Public Administrations



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### **D2.4 Requirement Specification and Use Case Models for TET and SPOD Subsystems**

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WISE&MUNRO



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**Revision History**

Version	Date	Authors	Status	Description of Changes
0.1	10-09-2015	L. Porwol	Outline	Outline of the deliverable
0.2	23-09-2015	Donato Pirozzi and Vittorio Scarano	SPOD-related	SPOD related changes, with emphasis on the interconnection and user experience seamlessly with TET
0.3	01-10-2015	E. Osagie	TET and TET/SPOD Related	Edited the Use Cases related mainly to the TET specific, TET/SPOD connections and a few SPOD specific Use Cases.
0.8	02-10-2015	M. Waqar	General updates	Update of Use Cases
0.9	02-10-2015	A. Stasiewicz	General updates	Formatting, General Updates
0.9.2	01-10-2015	E. Osagie	TET and TET/SPOD Related	Updated the Use Cases related mainly to the TET specific, TET/SPOD connections by improving on the textual descriptions for consistency purpose
1.0	22-10-2015	Sonya Abbas	Addressed reviewers comments	Addressed reviewers comments
1.1	16-02-2016	E. Osagie	Addressed reviewers comments	Addressed reviewers comments

1.1	16-05-2016		Tasks and the WPs capture	Interaction between the tasks and WP explained in executive summary
1.1	16-05-2016	E. Osagie	Addition of methodology	Added section 3 for methodology
			Explain depth of agile techniques in the development of SPOD and TET	Ignored not related to the deliverable
1.1	16-05-2016	E. Osagie	Engagement of the users shown the deliverables D2.4	Add section "Engagement of Workshops Participant" to the methodology
1.1	17-05-2016	E. Osagie	Show evidence of how the information from the engagement process is embedded in the deliverables	Table 1 list all the details of engagements. Added sections "Introducing Traceability" and "Tagging and Clustering procedure" in methodology to explain the processes
1.1	17-05-2016	E. Osagie	Clearly how engagement enables stakeholders to use SPOD and TET.	Explained in "Engagement of Workshops Participant" "
1.1	17-05-2016		Show evidence of pilots in the projects activities and reporting D2.4	Explained in "Engagement of Workshops Participant"
1.1	17-05-2016		Clarify User requirements and use case models for SPOD and TET as update of user stories. Show evidence of the capture and report on the workshops activities D2.4 development.	Explained under "Description of Tasks in D2.4" and also under "Engagement of Workshops Participant"

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## EXECUTIVE SUMMARY

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ROUTE-TO-PA (Raising Open and User-friendly Transparency-Enabling Technologies for Public Administration) is an innovation project focused on prototyping and piloting the integration of platforms for Open Data and a social network engine, enhanced with tools to facilitate Open Data understanding, metadata linking, and personalization of data usage. Two of the primary ROUTE-TO-PA project objectives, which are discussed in this report, are: 1) to enable the transition into the next generation of Open Data portals by creating tools that will enable citizens to socially engage over Open Data resources, the *Social Platform for Open Data (SPOD)* component of the project, and 2) to provide tools that could be integrated into existing Open Data platforms to deliver greater data transparency and quality and understandability, the *Transparency Enhancing Toolset (TET)* component. This report in particular presents an updated list of user stories and the specification of the use case models with detailed use case descriptions followed by requirements specification as the key design-base for ROUTE-TO-PA platform development. The target audience for this document includes, in principle, platform designers, developers as well as various platform stakeholders who will participate in the development and testing phase of the project. Nevertheless, all project consortium members are expected to provide feedback and relevant suggestions, accordingly to the expertise, in regard to the representation of key features important from the exploitation and sustainability perspective. In particular, in this deliverable we update and extend the list of user-stories in order to ensure that all the key aspects of user and system interaction are included in the scope of the platform specification. In this document we enrich, the user-stories and information needs analysis presented in deliverable D2.3 and derived from comprehensive scenarios, with information related to specific functional and non-functional aspects of TET and SPOD emerged during platform-vision presentation at plenary meetings. Moreover, we provide the democratic context to each of the stories and cluster them around specific assigned keyword tags. The emerged clusters are used to identify the specific use cases as a base for requirements specification. The final part of the document presents a comprehensive list of the functional and non-functional requirements as a blueprint for development works on ROUTE-TO-PA platform. The use cases covered by the existing tools adopted for the platforms were omitted to improve the clarity and readability of the document. The requirements specification is followed by conclusions including elaboration on limitations and initial remarks on the ROUTE-TO-PA platform development.

# 1 INTRODUCTION

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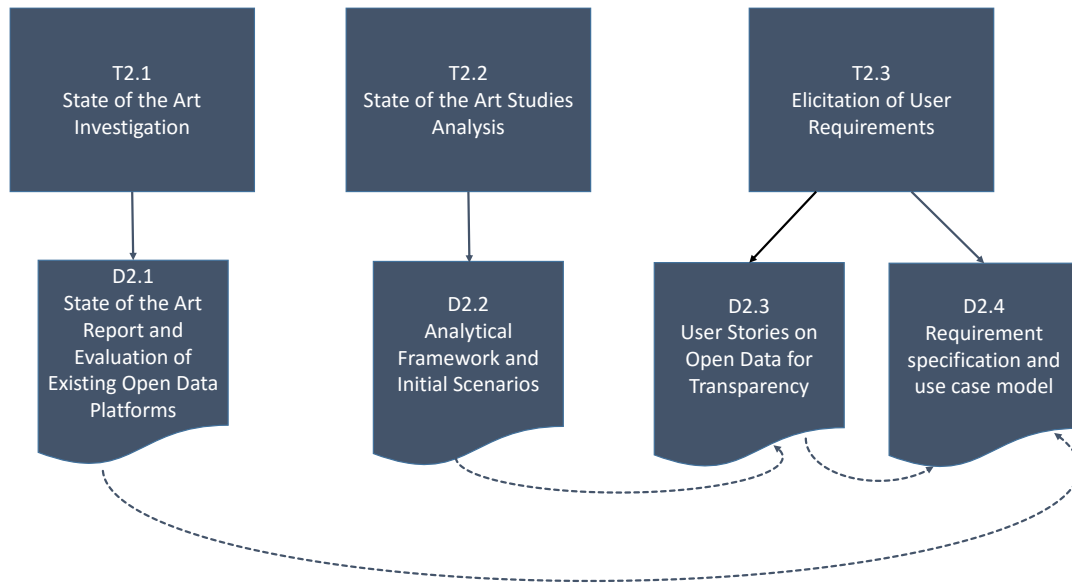
ROUTE-TO-PA is an innovation project focusing on improved Open Data transparency and citizen engagement by prototyping and piloting the integration of Open Data portal architecture with Social Networking platform features. The integrated platform is intended to be enhanced with specific explanatory tools and more personalized user-experience for better user-engagement and improved transparency. The essential part of our work is to deliver the ROUTE-TO-PA platform for several pilot deployments. This involves the design and development of the two major building components: Social Platform for Open Data (SPOD) and Transparency Enhancing Toolset (TET). Finally, ROUTE-TO-PA project will deliver relevant GUIDE for best practice for Open Data services. For this purpose, we adopted a collective intelligence and scenario-based design approach. The initial scenarios developed for each Pilot (during the workshop sessions and interviews on Open Data and transparency), presented in deliverable D2.2, highlight information, social and collaborative, and understandability, usability and decision-making needs and requirements that are important for the development of the SPOD, TET, and GUIDE. In deliverable D2.3, we analysed the scenarios from deliverable D2.2; and mapped them into the most suitable user stories based on TET and SPOD objectives. This was done by considering a set of factors or identifiers composed by a combination of an actor/user, an action/activity and a goal/outcome/result/benefit of the action/activity in the story that the actor/user intends to achieve or benefit from in the scenario statement(s) or sentence(s).

In this document, we update the user stories; we incorporate contextual information delivered by project stakeholders and align the methodology to follow the tagging convention to enhance traceability from user-stories in deliverable D2.3 into the user stories in this deliverable. As investigated in deliverable D2.1, the actors (the characters/users) play specific role(s), which tend to give meaning to or exemplify the democratic context in which they were involved in the society. We continue the traceability idea to further link the derived, detailed user stories (to a large extent aligned to TET and SPOD objectives) from the initial user-stories into the use cases (which go into the use case models) across the user stories. We do this by maintaining the actors (or system users) in their original roles regarding the context of the democratic models in which they featured. Thus in **Error! Reference source not found.**, we introduce the democracy model in which the actor (in the case of the functional requirements) exemplified in the role he/she in the preceding user story. Furthermore, this deliverable documents the analysis of the users stories, with use case models followed by detailed use case descriptions and requirements specification. The requirements are derived from the breakdown of the specific and unique functionalities and capabilities that the system must provide to the user when engaged in various activities and exploring the enhanced platform.

This deliverable D2.4 - "Requirement Specification and Use Case Models for TET and SPOD Subsystems" is produced as the output from task T2.3 (Elicitation of User Requirement). The report is the last in the series of deliverables for Work package WP2 (User and Systems Requirement) that aims to gather the use cases and

systems requirements for the major technology artefacts to be developed in WP4 – “Technological Development and Integration” which include SPOD and TET. Specifically, results of deliverable D2.4 will serve as input for TET and SPOD platform development in Work package WP4 (see Figure 1).

*Figure 1: Relationship between deliverable and other deliverables in WP2*



## 2 BACKGROUND

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The *Social Platform for Open Data (SPOD)* is focused on enhancing transparency by promoting collaboration to support several kinds of activities related to the use of Open Data. The general aim is to support people who share a common goal by providing awareness of respective activities, and supporting the creation of relationships among people with common interest. As noted in our review of the state-of-the-art, many software systems have been developed to support several aspects of collaboration: providing team awareness, supporting discussions, decision making, cooperative work, and collaborative learning. For example, a multitude of web-based tools supporting collaboration and social interactions have been developed, including Google Apps<sup>1</sup>, Smartsheet<sup>2</sup>, SlideRocket<sup>3</sup>, Wikipedia<sup>4</sup>, Delicious<sup>5</sup>, Facebook<sup>6</sup>. Their success has suggested the idea of using a social platform to support collaboration upon Open Data, to leverage users' familiarity with this kind of system. As noted in deliverable D2.1, currently, the social and collaborative features of existing open data platforms are generally limited to platform blogs and discussion of datasets on social media platforms. More work is needed to promote quality collaboration over Open Data.

The *Transparency Enhancing Toolset (TET)* is focused on extending the most popular and widely adopted Open Data platform such as CKAN, with a set of tools aimed at radically improving end-user access to relevant datasets as well as facilitating significantly better understanding of available datasets by “non-technical” end-users like citizens or the public at large through the provision of simple commonly used analytical tools and graphical representation of datasets in visualised manner. This is enabled by the integration of the following proposed methods:

- *Personalization of dataset offerings and consumption* – relevance of datasets to end-users is based on the social profiles of end-users, such as gender, age, location, interests and social network structure (e.g. friends) of end-users on ROUTE-TO-PA SPOD platform. In addition, usage information (or logs) and preferences for granularity and presentation form of datasets captured as part of the user information will also be used to further enhance the user experience and understanding.
- *Dataset Integration through Data Linking* – ROUTE-TO-PA TET toolset will implement an automatic link discovery procedure for available datasets to uncover unspecified relationship among datasets. At the

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<sup>1</sup> <http://apps.google.com>

<sup>2</sup> <https://www.smartsheet.com/>

<sup>3</sup> <http://www.sliderocket.com/>

<sup>4</sup> <https://www.wikipedia.org/>

<sup>5</sup> <https://delicious.com/>

<sup>6</sup> <http://facebook.com/>

same time dataset administrators will be able to exploit TET toolset to create the *physical links* between related datasets.

- *Profiling of Datasets based on information quality* – available datasets will be profiled based on the amount of metadata and provenance data (with respect to W3C Open Data related Standards) available on the datasets in addition to rating information provided by end-users. The generated profile will be made available to users to guide their use of such datasets. In addition to profiling datasets, this TET feature will create the first open data platform to implement W3C's Data Catalogue Vocabulary (DCAT) and provenance data model (PROV).

### 3 METHODOLOGY

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This section describes the methodology adopted in the development of use cases and systems requirements described in Sections 5 (Use Case Model), 6 (Common Use Cases for TET and SPOD) and 7 (Requirement Analysis). Section 3.1 describes the process and associated tasks in developing the use cases while Section 3.2 describes how workshop participants were engaged to elicit required input for the requirement process.

#### 3.1 THE REQUIREMENT PROCESS

The tasks of deliverable D2.4 were aimed to produce functional (system) specification necessary to commence development work; and were attained through the stages as shown in Figure 2.

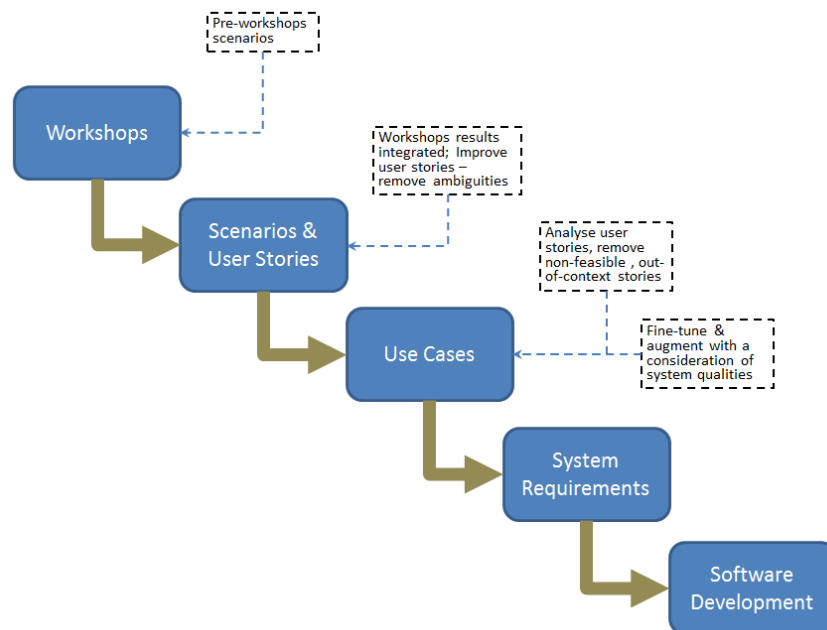


Figure 2: Methodology

The task involved drawing from, consolidating and analysing the results of earlier deliverables (D2.2 & D2.3), and at the same time aligning the output with the objectives of ROUTE-TO-PA. In details, we worked from workshops

results to the system specification documentation through 3 phases to fine-tune the user stories with the desired system capabilities and to establish requirements traceability from elicitation to the final requirements specification documentation for development work.

- First, we developed exemplar scenarios in which actors and roles were pre-defined and these were reported in ***Deliverable D2.2 – in which user stories were demonstrated as actions and goals achievement statements. The Pre-Workshop Phase***
- Second, we used the exemplar scenarios to facilitate idea generation and stimulate discussions with stakeholders in the five pilot workshops conducted in Dublin, Netherlands, Den Haag and Paris (Table 1). This was conducted to elicit detailed stakeholder requirements and various needs for the system development considerations. **The Workshop phase.**
- Third, results of the workshops were integrated together and reported in deliverable D2.3 and further improved the user stories by breaking each down into action works (tags), actor type, activity and output. This phase is represented by “**Scenarios and User stories**” phase in **Error! Reference source not found.**
- Forth, the user stories were reviewed and analysed to remove useless stories, out-of-scope or context stories and those that are not feasible for development work. The result of this task was reviewed with the system capabilities and then augmented with the required system capabilities that were considered necessary to enable users attain the goals mentioned in the selected user stories. We used this task to convert the stories into use cases (**The use case phase**). This task also involved the consideration of the system qualities (non-functional requirement) that enabled us to fine-tune the use cases into proper standard system requirements reported in previous D2.4 now re-submitted in this document.

Table 1: The five requirement workshops with locations, participants number and dates

No	Location	Workshop Date	Number of Participants	Male	Female	Stakeholders Type
1	Dublinked Initiative (Dublin)	17/April/2015 9:30 – 16:30	18	11	7	Platform provider, citizen engagement, technology developer, researcher, data provider.
2	Groningen, Netherlands	19/ May/2015	16	11	6	Researcher, PA(policy maker), journalist, PA(Information manager), PA(Open data expert)
3	Prato	23/April/2015	17	Unspecified	Unspecified	Project contact/facilitator, researcher, open data specialist, representative of local SMEs, census data office, journalist, hight

						school student, SW developer,
4	Den Haag	11/May/015	17	15	2	PA(project contact), employer, technologist, developed coach-R, researcher, PA(technologist),
5	Paris (issey les molineux)	15/May/2015 And 09/Jul/2015	15	Unspecified	Unspecified	Geographic information system, communication service, social & human resources, association, researcher & CEO start up, CEO- construction industry, CEO- computer graphics, Developers, CEO-social network- community management

### 3.2 THE ENGAGEMENT OF WORKSHOP PARTICIPANTS

In all the workshops conducted, the participants were asked to play roles of possible actors in the society such as a community activist (always requiring accountability from public administrators in the use of public funds), a Data Journalist (reporting on budget data in the media) or the role of a public administrator wanting to know more about the need of the people. Other roles in the workshops included entrepreneurs (looking for information on business environment) and a typical community resident who is interested in improved community services, social amenities, better education, safety and security in the neighbourhood. The workshops also allowed the participants to produce various types of requirements that will enable them to play the roles they assumed in the workshops sessions. For example we elicited stakeholder information needs, social, collaborative and interaction needs, data understandability, usability needs as well as decision-making needs in their various roles. These various needs and requirements were used in the design and selection of the system capabilities that were used in the augmentation of the elicited stakeholder requirements for the production of the functional requirements.

#### 3.2.1 INTRODUCING TRACEABILITY

Using the previous deliverables (D2.2 & D2.3), deliverable D2.4 was mainly concerned about analysis of the elicited requirements (D2.3) to remove incomplete and inadequate requirements stated by the stakeholders and which are not feasible for development or which do not make any sense in the context

of ROUTE-TO-PA project objectives as mentioned above. Analyses done was geared towards ensuring that the final set of requirements has a link to the initial set of user stories.

To introduce requirement traceability between the requirements (stated) from elicitation results through various analyses tasks and intermediate stages, we used a traceability matrix. We used the matrix to create traceability by assigning identifies (IDs) to the users stories (user requirements) from workshops. These requirements which were tagged were in turn made part of the Use Case clustering and naming while retaining their tags.

### 3.2.2 TAGGING AND CLUSTERING PROCEDURE:

As mentioned above, tagging was based on the key (action) word (verb) in each of the selected user stories (requirements). Because they were based on the key action words, user story tags were relevant in deriving use case names in that tags enabled us to **cluster** together all functionally related user stories in which users were most likely aiming to archive similar or related goals. Thus the tools required to be developed for each cluster are inter-connected or interdependent or related in some ways as shown in Table 2. It is important to note that the team also traced each user requirement to the particular democratic values that it tends to exemplify by reference to the scenarios number (as in **s1**) and the user story number (as in **.1**) the combination of which becomes scenario ID as in **s1.1**, for example. We also introduced another grouping process to group together all those functionalities applicable to TET, SPOD and TET/SPOD tools under the heading “**Interface**”. This grouping enabled us to trace each user story (requirement) or cluster of them to the three types of affected interfaces. This interface cluster was used in modelling the graphical use case models represented by Figure 3, Figure 4 and Figure 5.

## 4 USER STORIES

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The user-stories list presented in Table 2 has been derived from technical user-stories analysis incorporating the specific information needs elaborated in deliverable D2.3. We enriched every story with specific aspect of democracy (Monitorial, Deliberative and Participatory democracy) for better alignment of the stories to democratic processes needs. Every entry includes a user-story number with specific source-scenario ID for better traceability. We define actors' involved, performed activities and specific results. Moreover, we specify whether the particular use-case belongs to TET or SPOD design space.

The consolidated, fine-grained, user-stories have been clustered around specific keyword tags, assigned to each story and around performed activities, in order to prepare the base for use case elicitation and requirements specification, elaborated in detail the next part of this document.

Table 2: User Stories and Story Clustering

Number	Scenario ID	Keyword tag	Interface	Actor & Role played	Activity	Outcome/R result	Complete User story	Cluster	Democratic Context (Ref D2.2)
1	s1.1	Browse on SPOD	SPOD	Resident Kay	browses the wall of the local council Authority's public page,	so that he can read the latest news and events.	Resident Kay browses the wall of the local council Authority's public page, so that he can read the latest news and events.	1	Deliberative Democracy
2	s1.2	Insert file on SPOD	SPOD	Resident Kay	inserts media files on the post he created on SPOD	so that he can upload images and share with his network	Resident Kay inserts media files on the post he created on SPOD so that he can upload images and share with his network	2	Deliberative Democracy
3	s1.3	Post message on SPOD	SPOD	Resident Kay	posts inquiry on Administrators' page	so that he can inquire about the solution to local road problems	Resident Kay posts inquiry on Administrators' page so that he can inquire about the solution to local road problems	4	Deliberative Democracy
4	s1.4	Analyse data in TET	TET	Resident Kay	analyses dataset and creates a visualised report using TET tools	so that he can drag-n-drop the report icon unto SPOD for sharing	Resident Kay analyses dataset and creates a visualised report using TET tools so that he can drag-n-drop the report icon unto SPOD for sharing	3	Deliberative Democracy
5	s1.5	Drag-n-drop item from TET to SPOD	TET / SPOD	Resident Kay	drag-n-drop visualised report from TET to SPOD	so that he can share the report in the post created on SPOD	Resident Kay drag-n-drop visualised report from TET to SPOD so that he can share the report in the post created on SPOD	2	Monitorial Democracy
6	s2.2	Visualize data on TET	TET	Resident Kay	visualizes dataset on interactive dashboard	so that he can easily see and understand the indirect expenses	Resident Kay visualizes dataset on interactive dashboard so that he can easily see and understand the indirect expenses	3	Monitorial Democracy
7	s2.3	Export from TET to SPOD	TET / SPOD	Resident Kay	exports annotated graphical report from TET to SPOD	so that he can share it with his network members	Resident Kay exports annotated graphical report from TET to SPOD so that he can share it with his network members	12	Monitorial Democracy
8	s2.4	Share data / comment on SPOD	SPOD	Resident Kay	shares data and a message on SPOD	so that he could invite some professional to handle jobs that could reduce expenses	Resident Kay shares data and a message on SPOD so that he could invite some professional to handle jobs that could reduce expenses	12	Monitorial Democracy
9	s2.5	Download file from SPOD	TET / SPOD	Resident Kay	downloads dataset from SPOD to TET	so that he can access and analyse it on his TET (account)	Resident Kay downloads dataset from SPOD to TET so that he can access and analyse it on his TET (account)	2	Monitorial Democracy

Number	Scenario ID	Keyword tag	Interface	Actor & Role played	Activity	Outcome/R esult	Complete User story	Cluster	Democratic Context (Ref D2.2)
10	s2.6	Vote on SPOD	SPOD	Network members (Dublin)	vote “like” or “dislike” on humanitarian orgs unification	so that they can have their say on the humanitarian orgs unification debate	Network members (Dublin) vote “like” or “dislike” on humanitarian orgs unification so that they can have their say on the humanitarian orgs unification debate	13	Monitorial Democracy
11	s3.0	Login to TET/SPOD		Entrepreneur Annie (Dublin)	logs into (registers on) TET/SPOD-enabled CKAN platform using social media	so that she could introduce her existing social media profile and contacts into TET/SPOD enable CKAN platform	Entrepreneur Annie (Dublin) logs into (registers on) TET/SPOD-enabled CKAN platform using social media so that she could introduce her existing social media profile and contacts into TET/SPOD enable CKAN platform	1	Participatory Democracy
12	s3.1	Phone Alert	TET / SPOD	Entrepreneur Annie (Dublin)	receives a phone alert	so that she may know about data update in real time	Entrepreneur Annie (Dublin) receives a phone alert such as SMS so that she may know about data update in real time	4	Monitorial Democracy
13	s4.1	Create Forum on SPOD	SPOD	Entrepreneur Annie (Dublin)	creates a forum on SPOD	so that she could build a network of café/food operators	Entrepreneur Annie (Dublin) creates a forum on SPOD so that she could build a network of café/food operators	7	Monitorial Democracy
14	s4.2	Take a screenshot	TET	Café operator	takes a screenshot of the TET screen	so that he could save it and post it on SPOD to forum members	Café operator takes a screenshot of the TET screen so that he could save it and post it on SPOD to forum members	10	Deliberative Democracy
15	s5.1	Learn TET/SPOD	TET / SPOD	Jane (Dublin PA)	explores TET/SPOD tools	so that she could familiarise herself with their functionalities & learn how to apply them	Jane (Dublin PA) explores TET/SPOD tools so that she could familiarise herself with their functionalities & learn how to apply them	1	Participatory Democracy
16	s5.2	Interact on SPOD Forum	SPOD	Jane (Dublin PA)	activates the PA/Citizen interaction	so that PAs and citizens can receive and post messages in an interactive manner	Jane (Dublin PA) activates the PA/Citizen interaction so that PAs and citizens can receive and post messages in an interactive manner	9	Participatory Democracy
17	s6.1	Reward in Forum	SPOD	Jane (Dublin PA)	activates "reward" option on SPOD forum	so that she can motivate participation on forum discussions	Jane (Dublin PA) activates "reward" option on SPOD forum so that she can motivate participation on forum discussions	5	Participatory Democracy
18	s6.2	Accessibility feature	SPOD	Back-end manager	informs Jane that SPOD supports accessibility features	so that disabled users can personalise their interface to take advantage of the features	Back-end manager informs Jane that SPOD supports accessibility features so that disabled users can personalise their interface to take advantage of the features	5	Participatory Democracy

19	s7.1	annotate a screenshot or file	TET	Civic Joe	annotates a screenshot of a graph he took on TET	so that he could point to the area of emphasis before sharing on his SPOD network	Civic Joe annotates a screenshot of a graph he took on TET so that he could point to the area of emphasis before sharing on his SPOD network	3	Deliberative Democracy
Number	Scenario ID	Keyword tag	Interface	Actor & Role played	Activity	Outcome/R esult	Complete User story	Cluster	Democratic Context (Ref D2.2)
20	s8.1	Federate (import) datasets	TET	Civic Joe	imports datasets from other cities' TET/SPOD-enable CKAN platform	so that he can analyse them and compare the analysed results and use to support his argument	Civic Joe imports datasets from other cities' TET/SPOD-enable CKAN platform so that he can analyse them and compare the analysed results and use to support his argument	11	Deliberative Democracy
21	s8.2	Annotate a report with pointers	TET / SPOD	Civic Joe	inserts annotated report with pointers	so that he can highlight the needs for govt. release datasets and citizens to participate in democratic debates	Civic Joe inserts annotated report with pointers so that he can highlight the needs for govt. release datasets and citizens to participate in democratic debates	10	Deliberative Democracy
22	s9.1	Crowd-source SPOD content	SPOD	PA Sec. (Dublin)	crowd-sourced the user content on SPOD by exporting it to a text file	so that she could present the user generated content to PAs as inputs for their policy-making and budget decisions.	PA Sec. (Dublin) crowd-sourced the user content on SPOD by exporting it to a text file so that she could present the user generated content to PAs as inputs for their policy-making and budget decisions.	8	Participatory Democracy
23	s10.1	Customise a forum on SPOD	SPOD	Irene (PA)	customises the forum she created on SPOD	to enable participants personalise profiles on the forum	Irene (PA) customises the forum she created on SPOD to enable participants personalise profiles on the forum	7	Participatory Democracy
24	s10.2	Invite participants to a forum	SPOD	Irene (PA)	invites local PAs to the forum she created on SPOD	so that the PAs can participate in the forum discussion with community residents	Irene (PA) invites local PAs to the forum she created on SPOD so that the PAs can participate in the forum discussion with community residents	7	Participatory Democracy
25	s12.2	Save a Forum content to Profile	TET / SPOD	Irene (PA)	saves the content of the forum she created on her TET account	so that she could use it at a later date	Irene (PA) saves the content of the forum she created on her TET account so that she could use it at a later date	8	Participatory Democracy
26	S13.1	Access datasets on TET	TET	Antonio (Student leader)	logs into TET/SPOD-enabled platform and creates data search	so that he can access dataset and other resources on the platform	Antonio (Student leader) logs into TET/SPOD-enabled platform and creates data search so that he can access dataset and other resources on the platform	1	Monitorial Democracy
27	S13.9	import datasets for comparison purposes	TET	Antonio (Student leader)	imports datasets from other cities' TET/SPOD-enable CKAN platform	so that he can compare the results of the different datasets	Antonio (Student leader) imports datasets from other cities' TET/SPOD-enable CKAN platform so that he can compare the results of the different datasets	11	Monitorial Democracy

Number	Scenario ID	Keyword tag	Interface	Actor & Role played	Activity	Outcome/R esult	Complete User story	Cluster	Democratic Context (Ref D2.2)
28	S13.10	Prepare report & hard copies from Platform	TET / SPOD	Antonio (Student leader)	prepares various reports from the analyses he did on TET and sends reports to printer	so that he can print out hard copies	Antonio (Student leader) prepares various reports from the analyses he did on TET and sends reports to printer so that he can print out hard copies	8	Monitorial Democracy
29	S14.1	Reply to a post	SPOD	Antonio (Student leader)	replies to post	so that he could share files, messages, explanations and reports to his network	Antonio (Student leader) replies to post so that he could share files, messages, explanations and reports to his network	12	Monitorial Democracy
30	S14.2	Invitation on SPOD	SPOD	Students (Prato)	post messages on SPOD	as ideas in support of increased educational funding	Students (Prato) post messages on SPOD as ideas in support of increased educational funding	9	Monitorial Democracy
31	S14.3	Follow link to from SPOD to TET	SPOD	Students (Prato)	view created links on SPOD	to encourage discussion and remarks	Students (Prato) view created links on SPOD to encourage discussion and remarks	9	Monitorial Democracy
32	S15.1	Combine & Organise datasets	TET	Antonio (Student leader)	uses TET tools to combine, and clusters datasets from SPOD forum	so that he can properly organise them and analyse them properly	Antonio (Student leader) uses TET tools to combine, and clusters datasets from SPOD forum so that he can properly organise them and analyse them properly	3	Monitorial Democracy
33	S15.2	Filter SPOD comments on TET	TET	Antonio (Student leader)	filters the comments received on SPOD into TET	so that he can identify and extract the best option/contributions to export to text files	Antonio (Student leader) filters the comments received on SPOD into TET so that he can identify and extract the best option/contributions to export to text files	3	Monitorial Democracy
34	S17.5	Take a screenshot for annotation purposes	TET	Anna (Community Leader)	takes screenshots of visualised maps, graphs, report; saves them on her TET account then exports all to other files formats (TET)	so that she can upload them into her SPOD post to support her argument	Anna (Community Leader) takes screenshots of visualised maps, graphs, report; saves them on her TET account then exports all to other files formats (TET) so that she can upload them into her SPOD post to support her argument	10	Monitorial Democracy
35	S17.10	Collaborate on editing	SPOD	Anna (Community Leader)	creates an online collaborative text file with link to SPOD	so that the SPOD forum participants can collaborate on ideas submission or generation	Anna (Community Leader) creates an online collaborative text file with link to SPOD so that the SPOD forum participants can collaborate on ideas submission or generation	5	Monitorial Democracy

36	S17.14	Proposal through SPOD	SPOD	Anna (Community Leader)	sends a proposal to PA via SPOD email tool	so that the PAs can receive her suggested ideas on education speeding	Anna (Community Leader) sends a proposal to PA via SPOD email tool so that the PAs can receive her suggested ideas on education speeding	4	Monitorial Democracy
Number	Scenario ID	Keyword tag	Interface	Actor & Role played	Activity	Outcome/R esult	Complete User story	Cluster	Democratic Context (Ref D2.2)
37	S18.8	Service rating	TET	Giulio (Journalist)	Rates the speed of Data supply services in response to data request by user	in order for others to see and to serve as reward for the data supplier	Giulio (Journalist) Rates the speed of Data supply services in response to data request by user in order for others to see and to serve as reward for the data supplier	13	??Deliberative Democracy
38	S19.4	Chat on SPOD	SPOD	Giulio (Journalist)	accepts chat SPOD interface	so that he could engage in instant chat session with chatters for more clarification	Giulio (Journalist) accepts chat SPOD interface so that he could engage in instant chat session with chatters for more clarification	4	Deliberative Democracy
39	S26.5	Create and Personalise account	TET / SPOD	Ben (Consultant)	Creates & personalises his account data on Platform	so that he can search data on platform and receive recommendation from the system based on his profile details	Ben (Consultant) Creates & personalises his account data on Platform so that he can search data on platform and receive recommendation from the system based on his profile details	15	Monitorial Democracy
40	S26.6	Pick TET items for analysis	TET	Ben (Consultant)	adds datasets to analysis basket	so that he can analyse the datasets later with TET tools	Ben (Consultant) adds datasets to analysis basket so that he can analyse the datasets later with TET tools	6	Monitorial Democracy
41	S26.7	Use Analysis tab	TET	Ben (Consultant)	opens analysis tab	so that he can analyse the datasets in it	Ben (Consultant) opens analysis tab so that he can analyse the datasets in it	6	Monitorial Democracy
42	s28.1	enrich user profile	TET / SPOD	Ben (Consultant)	logs on to TET/SPOD-enabled CKAN platform, adds more data to profile	so that he can search & receive resources on the platform based on his profile details	Ben (Consultant) logs on to TET/SPOD-enabled CKAN platform, adds more data to profile so that he can search & receive resources on the platform based on his profile details	1	Participatory Democracy
43	s28.2	Filter-enhance location-based Search in SPOD	SPOD	Ben (Consultant)	uses the location-filter enabled search functionality	so that he can find discussions on "Groningen business development and unemployment"	Ben (Consultant) uses the location-filter enabled search functionality so that he can find discussions on "Groningen business development and unemployment"	1	Participatory Democracy
44	s28.3	Post on SPOD	SPOD	Ben (Consultant)	selects "Dutch government business support" thread	so that he can create a post for his ideas on Open Data-based app for entrepreneurs in Groningen area.	Ben (Consultant) selects "Dutch government business support" thread so that he can create a post for his ideas on Open Data-based app for entrepreneurs in Groningen area.	6	Participatory Democracy

Number	Scenario ID	Keyword tag	Interface	Actor & Role played	Activity	Outcome/R esult	Complete User story	Cluster	Democratic Context (Ref D2.2)
45	s28.4	Attach item from TET platform	TET / SPOD	Ben (Consultant)	attaches the relevant maps, graphs and data summaries from his private space that he had saved before	so that he can use them as relevant evidence in his post.	Ben (Consultant) attaches the relevant maps, graphs and data summaries from his private space that he had saved before so that he can use them as relevant evidence in his post.	2	Participatory Democracy
46	s28.5	Discuss on SPOD	SPOD	PAs & Business owners	post replies	so that they can start discussions on entrepreneurship, unemployment and business-essential facilities in Groningen	PAs & Business owners post replies so that they can start discussions on entrepreneurship, unemployment and business-essential facilities in Groningen	7	Participatory Democracy
47	s29.1	Pick TET items for analysis	TET	Henk (Entrepreneur)	checks metadata quality of, then selects: "Demographics 2005-2015", "Demographics prognosis" datasets from the recommendation list	so that he can add them to the analysis "basket".	Henk (Entrepreneur) checks metadata quality of, then selects: "Demographics 2005-2015", "Demographics prognosis" datasets from the recommendation list so that he can add them to the analysis "basket".	6	Monitorial Democracy
48	s29.2	Check and rate dataset quality	TET	Henk (Entrepreneur)	checks the quality of "Demographics 2005-2015", "Demographics prognosis" datasets he selected	so that he can be sure they meet the desired quality for his purpose	Henk (Entrepreneur) checks the quality of "Demographics 2005-2015", "Demographics prognosis" datasets he selected so that he can be sure they meet the desired quality for his purpose	6	Monitorial Democracy
49	s29.3	Analyse data in TET	TET	Henk (Entrepreneur)	adds demographic data to analysis tab after adding the dataset provenance to the data and then opens the analysis tab	so that he can analyse data and observe specific correlationship	Henk (Entrepreneur) adds demographic data to analysis tab after adding the dataset provenance to the data and then opens the analysis tab so that he can analyse data and observe specific correlationship	6	Monitorial Democracy
50	s29.4	Explore map in TET	TET	Henk (Entrepreneur)	explores the map of Ulrum by using various TET tools	so that he can get reports and narratives from the distribution to save.	Henk (Entrepreneur) explores the map of Ulrum by using various TET tools so that he can get reports and narratives from the distribution to save.	8	Monitorial Democracy

Number	Scenario ID	Keyword tag	Interface	Actor & Role played	Activity	Outcome/R esult	Complete User story	Cluster	Democratic Context (Ref D2.2)
51	s29.5	Print report from TET	TET	Henk (Entrepreneur)	prints hard copies of his saved reports and collaboration documents	so that he can include them in the Urlum 2034 project strategy document.	Henk (Entrepreneur) prints hard copies of his saved reports and collaboration documents so that he can include them in the Urlum 2034 project strategy document.	8	Monitorial Democracy
52	s30.1	Receive Post in SPOD	SPOD	Henk (Entrepreneur)	receives a response from a representative of the national agencies	so that he can read the information that they are in possession of related documents, and get the links to the datasets uploaded on TET platform.	Henk (Entrepreneur) receives a response from a representative of the national agencies so that he can read the information that they are in possession of related documents, and get the links to the datasets uploaded on TET platform.	4	Deliberative Democracy
53	s30.2	Link to TET-platform	TET / SPOD	Henk (Entrepreneur)	follows link to another TET-enabled platform	so that he can explore the maps, graphs and provide narratives.	Henk (Entrepreneur) follows link to another TET-enabled platform so that he can explore the maps, graphs and provide narratives.	11	Deliberative Democracy
54	s31.1	Use widget and tag in SPOD	SPOD	Henk (Entrepreneur)	attaches widget and voting tag to this post	so that network members can be listed and vote using the widget and the tag tools.	Henk (Entrepreneur) attaches widget and voting tag to this post so that network members can be listed and vote using the widget and the tag tools.	13	Participatory Democracy
55	s31.2	Collaborate on SPOD	SPOD	The community	votes on proposals and collaborates on SPOD	so that they can provide ideas for Ulrum area development	The community votes on proposals and collaborates on SPOD so that they can provide ideas for Ulrum area development	4	Participatory Democracy
56	s32.1	Start a Discussion on SPOD	SPOD	Martin	starts a new thread on SPOD	so that he can use his saved TET-enabled analysis to support his comments and observations	Martin starts a new thread on SPOD so that he can use his saved TET-enabled analysis to support his comments and observations	4	Monitorial Democracy
57	s32.2	Search for a Dataset /Topic on TET/SPOD	SPOD	Martin	uses search functionality	so that he can find discussions on “unemployed disabled job creation support”	Martin uses search functionality so that he can find discussions on “unemployed disabled job creation support”	1	Monitorial Democracy
58	s35.1	PA joins discussion on SPOD	SPOD	PAs (Den Haag)	join SPOD discussion	so that they can provide links to relevant datasets and analysis on disabled employment legislation and disabled job market.	PAs (Den Haag) join SPOD discussion so that they can provide links to relevant datasets and analysis on disabled employment legislation and disabled job market.	2	Participatory Democracy

Number	Scenario ID	Keyword tag	Interface	Actor & Role played	Activity	Outcome/R esult	Complete User story	Cluster	Democratic Context (Ref D2.2)
59	s36.1	Network with “Like-minded” on SPOD	SPOD	Entrepreneur Annie (Den Haag)	engages in discussion with people who are also seeking good employments	so that she can share her experience and doubts with the community and receive relevant recommendations and advises	Entrepreneur Annie (Den Haag) engages in discussion with people who are also seeking good employments so that she can share her experience and doubts with the community and receive relevant recommendations and advises	1	Participatory Democracy
60	s37.1	Share Profile on SPOD	SPOD	Citizen Ria	shares her ROUTE-TO-PA profile with her network of job-hunters	so that the job-hunters can have access to the profile data - including her skills, past experiences and work preferences	Citizen Ria shares her ROUTE-TO-PA profile with her network of job-hunters so that the job-hunters can have access to the profile data - including her skills, past experiences and work preferences	1	Participatory Democracy
62	s38.1	Align TET/SPOD-enabled CKAN platform with Social Media profile	TET / SPOD	Entrepreneur Anne	logs into TET/SPOD-enabled platform via external social media interface	so that she can maintain same profile on both platform and import her contacts across	Entrepreneur Anne logs into TET/SPOD-enabled platform via external social media interface so that she can maintain same profile on both platform and import her contacts across	1	Monitorial Democracy

## 5 USE-CASE MODELS

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In this section we elicit use-cases from user stories. In particular we derive and group the use-cases based on the user-stories clusters presented in section 3. We gathered in Table 3 all the use-cases elicited. We identify primary actors involved and the source-user-story ID for better traceability of the use-cases. We present detailed descriptions only for use-cases dealing with specific challenges addressed by the ROUTE-TO-PA platform; we omit use-cases already supported by tools leveraged as a base platforms for TET and SPOD platforms: CKAN and Oxwall respectively. We divide the use case description into three blocks: 1) TET, 2) SPOD and 3) Common for better readability. Every block starts with a use-case diagram.

*Table 3 : Use Case List*

Use Case ID	Primary Actor	Use Cases	Ref User Story ID
UC1	User [Henk (Entrepreneur)]	Check Metadata Completeness	S29.1
UC2	User [Henk (Entrepreneur)]	View Provenance and metadata related to a Data Set	S29.3
UC3	User [Henk (Entrepreneur)]	Check Dataset Quality	S29.2
UC4(A)	User (Resident Kay)	Provide Supporting Content on SPOD Post	S2.3
UC4(B)	User (Resident Kay)	Share a dataset with a visualisation on SPOD	S2.1
UC5	User [PA (Den Haag)]	Provide Supporting Content on SPOD Post (Share Link to Dataset/File via SPOD Post)	S35.1
UC6	User (Civic Joe)	Take a Screenshot and Annotate it	S7.1
UC7	User [Henk (Entrepreneur)]	Attach Widgets and Tags Tools on SPOD Forum	S31.1
UC8	User [Entrepreneur Annie (Dublin)]	Using External Social Media for Login Authentication: e.g. Facebook (External Social Media Authentication)	S3.0
UC9	User [Network Member]	Voting on SPOD	S2.6
UC10	User [Resident Kay]	Analyze a Dataset	S1.4
UC11	User [Martin]	Query Data	S32.2
UC12	User [Civic Joe]	Integrate a Dataset	S8.1
UC14	User [Civic Joe]	Link a Dataset	S8.1
UC15	User [Antonio (Student leader)]	Add a Dataset to Compare	S13.9
UC16	User [Antonio (Student leader)]	Compare Datasets	S13.9
UC17	User [Ben (Consultant)]	Personalize Search	S28.2
UC18	User [Annie (Entrepreneur) Dublin]	Receive Notification for New Datasets	S3.1
Use Case ID	Primary Actor	Use Cases	Ref User Story ID
UC19	User [Ben (Consultant)]	Request Recommendations for Data Sets	S26.5

UC20	User [Resident Kay]	View a Chart	S2.2
UC21	User [Resident Kay]	View Infographic	S2.2
UC22	User [Ben (Consultant)]	Post on SPOD	S28.3
UC23	User [Ben (Consultant)]	Login	S28.1
UC24	User [Entrepreneur Anne]	Enrich Profile	S38.1
UC26	User (Citizen/PA)	Add an Event	
UC27	Joe (Civic Hacker)	Create a New Topic Enabling an Anonymous Posting	
UC28	Ben (Consultant)	Digest Information in a Private Space	
UC29	User	Enable Rewarding Content on SPOD	

### **Details of Use Case Descriptions and Data Flow**

Below we present the details of the individual use case descriptions and the data flow for main actions, alternative actions as well as exceptions where errors might occur due to user mistakes or incomplete/wrong data inputs. We attempt to include such information as **preconditions** – conditions that need to exist before the actions of the use case can proceed and the post-conditions – what results from the actions of the user on the system. In some cases, we made a mention of the other use case(s) that will come in play before the use case in question. Where there are doubtful conditions or unclear situations, at least at this stage of this project development, we included assumptions to enable us describe the flow of activities of the user in the use case. Besides the above, we added, in many cases, some notes about the system features or parameters that are yet to be determined but which we believe are relevant for proper functioning of the system to meet user needs.

## 5.1 TET USE CASES

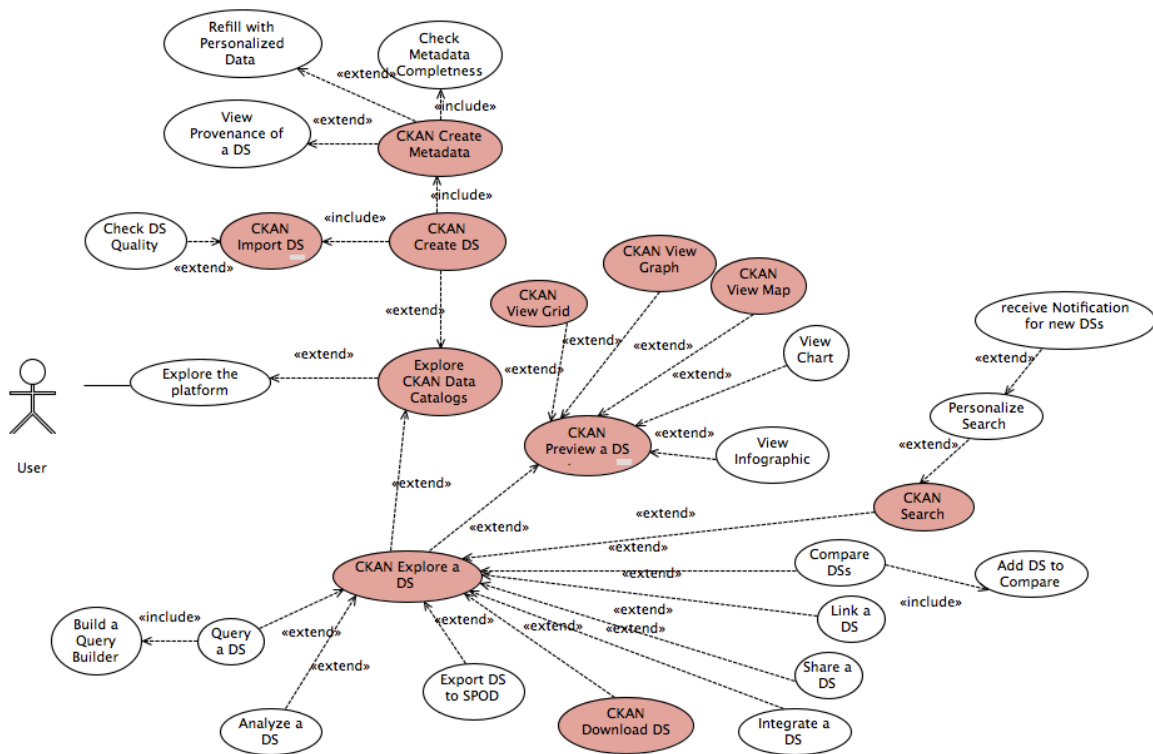


Figure 3: TET USE CASE DIAGRAM

### 5.1.1 CHECK METADATA COMPLETENESS

<b>Use Case ID:</b>	UC1		
<b>Use Case Name:</b>	Check Metadata Completeness		
<b>Created By:</b>	E. Osagie	<b>Last Updated By:</b>	
<b>Date Created:</b>	20/08/2015	<b>Last Revision Date:</b>	
<b>User Story ID:</b>	S29.1		
<b>Actors:</b>	User [Henk (Entrepreneur)]		
<b>Description:</b>	The user is trying to find information on the metadata completeness quality of the dataset he is about to select for use in planning purposes. So he checks the metadata completeness quality of dataset first, before selecting the datasets: "Demographics 2005-2015", "Demographics prognosis".		
<b>Trigger:</b>	Henk is planning to write a livability plan for Ulrum in cooperation with other citizens. This plan will concern various policy topics, from culture, tourism and economic matters, to health and youth facilities. In order to write his plan, he is searching for datasets that can help him map the problems in the region and find solutions.		
<b>Preconditions:</b>	To check metadata completeness, User needs to <ol style="list-style-type: none"> <li>1. open the CKAN platform</li> <li>2. open the CKAN dataset catalogues</li> <li>3. select a dataset which is to be checked for metadata completeness</li> </ol>		
<b>Postconditions:</b>	On clicking on the CHECK METADATA completeness button: <ol style="list-style-type: none"> <li>1. System must provide a visualized graphical representation of the metadata completeness status of the dataset</li> <li>2. The completeness status must be in line with the standardized OD guidelines for metadata completeness</li> </ol>		

	3. The graphical representation should a popular simple bar or pie chart for easy understandability by users
<b>Normal Flow:</b>	While in the dataset catalogue of the CKAN platform: 1. User selects a dataset by clicking on the datasets name inside the dataset catalogue of CKAN platform 2. System reads details in all field of the dataset including metadata fields completed for the dataset by the supplier 3. System displays a visualized bar of metadata completeness and displays metadata field e.g. name of supplier, contact person, provenance record, context, etc.
<b>Alternative Flows:</b>	N/A
<b>Exceptions:</b>	N/A
<b>Includes:</b>	1. Login use case 2. Explore CKAN data catalogue use case
<b>Frequency of Use:</b>	As required by users
<b>Special Requirements:</b>	1. Performance (short response time) – Visualization response time must be short 2. Simple graphical representation model to be used 3. System Performance
<b>Assumptions:</b>	It's assumed that searching data and viewing data as well as the metadata completeness quality on TET/SPOD CKAN platform require user login. However, these are to be determined.
<b>Notes and Issues:</b>	To be determined: 1. This use case includes the Explore CKAN data catalogue use case which brings user into the dataset catalogue where dataset completeness quality can be viewed 2. Response time for display of visualized metadata completeness 3. What constitutes standard metadata requirement for each category of datasets e.g. what constitute the metadata of transportation dataset, education dataset, demographic dataset, health datasets, etc. OR what generally constitutes metadata requirement and hence it's completeness for a given dataset on platform. 4. The criteria for measuring the completeness or otherwise of datasets – e.g. how many metadata fields were completed for the dataset by the supplier and how many were left uncompleted? 5. Activities that can be performed on the TET/SPOD enabled CKAN platform with or without login.

#### 5.1.2 VIEW PROVENANCE AND METADATA RELATED TO A DATA SET

<b>Use Case ID:</b>	UC2		
<b>Use Case Name:</b>	View Provenance and Metadata related to a Data Set		
<b>Created By:</b>	E. Osagie	<b>Last Updated By:</b>	
<b>Date Created:</b>	20/08/2015	<b>Last Revision Date:</b>	
<b>User Story ID:</b>	S29.3		
<b>Actors:</b>	User [Henk (Entrepreneur)]		
<b>Description:</b>	The use case describes how a user can view the metadata and the provenance information related to a dataset so that he can decide on suitability and credibility of the source.		
<b>Trigger:</b>	User wants to view metadata and provenance information related to a particular Data Set.		
<b>Preconditions:</b>	To view provenance and metadata related to a Data Set, user needs to 1. open the CKAN platform 2. open the CKAN data catalogues 3. select a Data Set,		
<b>Postconditions:</b>	On clicking on the selected Data Set link: 1. System displays the details of the metadata/provenance record fields provided by the dataset supplier 2. The system must present the content along with the Data Set to the user		
<b>Normal Flow:</b>	1. User clicks on the name of dataset of interest to the user 2. System displays the dataset		

	3. System lists all the metadata information and the provenance records
<b>Alternative Flows:</b>	
<b>Exceptions:</b>	NA
<b>Includes:</b>	1. Explore CKAN data catalogue
<b>Frequency of Use:</b>	As required by users
<b>Special Requirements:</b>	1. System supportability for the function 2. Performance 3. Usability
<b>Assumptions:</b>	
<b>Notes and Issues:</b>	To be determined: 1. Data suppliers or data publishers will be obliged to supply dataset provenance along with the dataset they supply

### 5.1.3 CHECK DATASET QUALITY

<b>Use Case ID:</b>	UC3		
<b>Use Case Name:</b>	Check and Rate Dataset Quality		
<b>Created By:</b>	E. Osagie	<b>Last Updated By:</b>	
<b>Date Created:</b>	18/08/2015	<b>Last Revision Date:</b>	
<b>User Story ID:</b>	S29.2		
<b>Actors:</b>	User [Henk (Entrepreneur)]		
<b>Description:</b>	Henk (Entrepreneur) needs to produce a plan, which will utilize various policy topics from culture, tourism and economic matters, health and youth facilities. In order to write a good plan, he is searching for quality datasets from open data portal. Therefore, he filters datasets per quality criteria in order to get the suitable datasets with the required quality. he checks the quality of "Demographics 2005-2015", "Demographics prognosis" datasets he selected so that he can be sure they meet the desired quality for his purpose. He also uses the same opportunity to rate the quality of the dataset available to him on the system so that other people can easily view his ratings on the datasets.		
<b>Trigger:</b>	The user (Henk) has a very important planning task to do and needs to produce a very high quality report on the situation of the population decline in Ulrum and the implications on educational and social services available to the reducing number of people living in the area and how to revive the declining population. He needs to produce a plan, which will utilise various policy topics from culture, tourism and economic matters, to health and youth facilities. To be sure of quality plan, he needs to use quality datasets which prompts the need to check the quality of datasets but also uses the same opportunity to rate the quality of datasets he checks.		
<b>Preconditions:</b>	<ol style="list-style-type: none"> <li>1. User must own account on platform</li> <li>2. User must be logged into the TET enabled-CKAN platform</li> <li>3. User must open into the data catalogue window</li> <li>4. User must select a dataset before being able to check on the quality of the dataset.</li> </ol>		
<b>Postconditions:</b>	<p>Once user clicks dataset VIEW QUALITY button:</p> <ol style="list-style-type: none"> <li>1. System should display the status of the various quality parameters of the dataset in a measurable manner</li> <li>2. Quality parameters, based on standardized OD guidelines, should include <ol style="list-style-type: none"> <li>a. Metadata, Provenance, context</li> <li>b. Last update, Frequency of update</li> <li>c. Supplier/publisher's name, Contact name</li> </ol> </li> </ol>		

	d. etc.
<b>Normal Flow:</b>	<p>While the user is in the data catalogue window:</p> <ol style="list-style-type: none"> <li>1. User filter datasets per quality</li> <li>2. System returns an ordered list of datasets from highest quality to lowest</li> <li>3. User clicks on dataset of interest</li> <li>4. System displays dataset and VIEW QUALITY button</li> <li>5. User clicks on VIEW QUALITY button [other available buttons: RATE, SHARE LINK and DOWNLOAD – to rate dataset quality, to share dataset link and to download dataset respectively]</li> <li>6. System displays the dataset quality parameters and a BACK navigation button</li> <li>7. User finishes with viewing the dataset quality, then clicks on BACK button</li> <li>8. System returns to step 3 of this flow</li> <li>9. User clicks on RATE button</li> <li>10. System presents a scale to rate the quality of the dataset</li> <li>11. User ranks/rates the quality</li> <li>12. Systems records the rating and displays a message [Quality rating done - OK]</li> <li>13. User clicks OK button</li> <li>14. System returns to the Dataset quality screen at step 2</li> </ol>
<b>Alternative Flows:</b>	None
<b>Exceptions:</b>	<p>User cannot select more than one dataset at a time to check for their qualities:</p> <p>At step 1 of the normal flow,</p> <ol style="list-style-type: none"> <li>1. User checks on multiple CHECKBOXES next to datasets of interest to the user</li> <li>2. System selects the datasets [internal]</li> <li>3. User clicks on VIEW QUALITY button</li> <li>4. System displays error message [You can only view quality for one dataset at a time. OK]</li> <li>5. User clicks on OK button</li> <li>6. System clears all previous checkboxes checked on by user and returns to step 1 of normal flow.</li> <li>7. User restarts from step 1 of normal flow and this time checks on only one CHECKBOX.</li> <li>8. Use case continues from step 2 of the normal flow to the end.</li> </ol>
<b>Includes:</b>	<p>Include uses cases are:</p> <ol style="list-style-type: none"> <li>1. Login use case</li> <li>2. Explore CKAN data catalogue</li> </ol>
<b>Frequency of Use:</b>	On Demand
<b>Special Requirements:</b>	<ol style="list-style-type: none"> <li>1. Usability – ease of learnability</li> <li>2. Performance – speed (response time)</li> <li>3. Accuracy and simplicity of quality representations</li> <li>4. Interface friendliness</li> </ol>
<b>Assumptions:</b>	It's assumed that selecting provenance for dataset on CKAN platform entails attempts to download the dataset for further use other than view on the screen. Therefore, the service would require user login.
<b>Notes and Issues:</b>	<p>To be determined:</p> <ol style="list-style-type: none"> <li>1. Open Data quality parameters, based on standardized OD guidelines</li> <li>2. Dataset quality rating scale – whether <ol style="list-style-type: none"> <li>a. by individual quality parameter and then overall score or</li> <li>b. by a single overall rating</li> </ol> </li> </ol>

#### 5.1.4 TAKE A SCREENSHOT AND ANNOTATE IT

<b>Use Case ID:</b>	UC6		
<b>Use Case Name:</b>	Take a Screenshot and Annotate it		
<b>Created By:</b>	E. Osagie	<b>Last Updated By:</b>	
<b>Date Created:</b>	22/08/2015	<b>Last Revision Date:</b>	
<b>User Story ID:</b>	S7.1		

	<p>Other similar user stories:</p> <ol style="list-style-type: none"> <li>1. S4.2 – User takes a screenshot for sharing without annotation</li> <li>2. S8.2 – Users takes a screenshot, annotate it and share with PAs</li> </ol>
<b>Actors:</b>	Civic Joe (User)
<b>Description:</b>	User (Civic Joe) is viewing a dataset on the screen and believes he needs to use what he viewing as a fact to buttress his explanations to members of his network on SPOD forum. Therefore, he takes a screenshot and annotates it by highlighting it with colours, introducing arrow pointers, and various shapes into the screenshot as he annotates it. Further, he attaches the annotated file on to a reply post to his network
<b>Trigger:</b>	User (Civic hacker Joe) is part of the civic community and a member of an active citizen group. He advocates social equality and maintains that citizens need a more participatory democracy to create a better society for all. He believes that open data opens access to public information and promotes transparency. He interacts with public data to understand how public decisions are made, to support his views and receive feedback on them from PAs who are leading local projects. These make Joe feel he has been part of the decision and policy making processes. Joe also shares ideas and data with other citizen groups by attaching data and annotated files to SPOD posts with a view to collaborating on projects and achieving common goals with other citizens.
<b>Preconditions:</b>	<p>To be able to take and annotate a screenshot for sharing:</p> <ol style="list-style-type: none"> <li>1. User (Civic Joe) must maintain an account on platform</li> <li>2. User must be logged onto platform</li> <li>3. User must open the file or SPOD comment to take a screenshot of the screen user is interested in.</li> </ol>
<b>Postconditions:</b>	<ol style="list-style-type: none"> <li>1. Once screenshot is taken, system must present user with the tools (paint tools and annotation pens &amp; paint brushes with various colours to annotate the screenshot)</li> <li>2. On the same screen, system must present user with the tools to erase and edit the annotation mark, save or directly post the annotated screenshot on SPOD post</li> </ol>
<b>Normal Flow:</b>	<p>User is viewing a dataset file, a graphically visualized file or dashboard of visualized item or a map on TET-enabled CKAN platform:</p> <ol style="list-style-type: none"> <li>1. User clicks on SCREENSHOT button on the menu list of the window</li> <li>2. System presents user with screenshot and annotation tools</li> <li>3. User uses the system tools to take screenshot and annotate the screenshot as desired</li> <li>4. User clicks on SAVE button</li> <li>5. Systems saves the screenshot and presents notification [File saved]</li> <li>6. System returns to the screenshot window.</li> </ol>
<b>Alternative Flows:</b>	<p>A) From step 5 of the normal flow user chooses to share the save file later, user will execute use case UC4 (Provide Supporting Content on SPOD Post)</p> <p>B) User chooses to share screenshot file (annotated or not) directly without saving it first:</p> <ol style="list-style-type: none"> <li>1. User clicks on SHARE button on the screenshot window</li> <li>2. System auto-switches to SPOD interface, creates a MESSAGE BOX and attaches the screenshot file</li> </ol>
<b>Exceptions:</b>	None
<b>Includes:</b>	<ol style="list-style-type: none"> <li>1. Login use case</li> </ol>
<b>Frequency of Use:</b>	On demand
<b>Special Requirements:</b>	<ol style="list-style-type: none"> <li>1. Supportability for the screenshot functionality</li> <li>2. Performance (speed)</li> <li>3. Usability</li> <li>4. Simplicity and Learnability</li> <li>5. Supportability for SPOD network</li> </ol>
<b>Assumptions:</b>	System will enable viewers (other users) who receive the annotated file to open the file and view it
<b>Notes and Issues:</b>	<p>To be determined:</p> <ol style="list-style-type: none"> <li>1. User have to save a screenshot before being able to share it or user can share it directly with his network without having to save it first</li> </ol>

	2. File default format that the system will attach to post if user decides to share screenshot directly without first saving it.
	3. Response time to determine performance for file attachment functionality

#### 5.1.5 ANALYZE A DATASET

<b>Use Case ID:</b>	UC10	
<b>Use Case Name:</b>	Analyse a Dataset	
<b>Created By:</b>	Sonya Abbas	<b>Last Updated By:</b>
<b>Date Created:</b>		<b>Last Revision Date:</b>
<b>User Story ID:</b>	S1.4	
<b>Actors:</b>	User [Resident Kay]	
<b>Description:</b>	This use case describes how the user uses TET to analyze data.	
<b>Trigger:</b>	User chooses "Analyze Data"	
<b>Preconditions:</b>	<ol style="list-style-type: none"> <li>1. User has logged in</li> <li>2. User has chosen a dataset in a valid format (xls, csv, tsv)</li> </ol>	
<b>Postconditions:</b>	User receives results of the analysis he performs	
<b>Normal Flow:</b>	<ol style="list-style-type: none"> <li>1. User chooses "Analyze Data"</li> <li>2. System loads dataset according to its format</li> <li>3. System requests descriptive statistics web service from open source data analysis tools</li> <li>4. System presents the results of the service summarized by: 1) rows names – 2) columns names – 3) number of rows – 4) number of columns – 5) type of data in each column – 6) columns headers (if exist) and first few rows – 7) last few rows of data – 8) min – 9) max – 10) 1<sup>st</sup> quarter – 11) 3<sup>rd</sup> quarter – 12) median – 13) mean of each column</li> <li>5. User receives results</li> </ol>	
<b>Alternative Flows:</b>	<ol style="list-style-type: none"> <li>2a. In step 2 of the normal flow, if the user selects poor – empty, NULL - dataset <ol style="list-style-type: none"> <li>1. System will ask user to choose another dataset</li> <li>2. User change the dataset</li> <li>3. Use Case resumes on step 3</li> </ol> </li> </ol>	
<b>Exceptions:</b>	<ol style="list-style-type: none"> <li>3a. In step 3 of the normal flow, Web service is down <ol style="list-style-type: none"> <li>1. System will inform user</li> <li>2. System will ask user to try again later</li> <li>3. User tries again</li> <li>4. Use Case resumes on step 3</li> </ol> </li> </ol>	
<b>Includes:</b>	Log in	
<b>Frequency of Use:</b>	40 per hour	
<b>Special Requirements:</b>	Supportability – performance – speed – accuracy – simplicity	
<b>Assumptions:</b>		
<b>Notes and Issues:</b>	<p>Valid formats for analysis are xls, csv and tsv so far but more could be added in further iterations –</p> <p>Advanced analysis (like Univariate analysis) could be offered and this will involve input from user like choose what variable he wants to analyse.</p> <p>Will this use case also covers the following scenario:</p> <ol style="list-style-type: none"> <li>1. User saves a discussion (like post + comments + likes etc.)</li> <li>2. User export it to TET</li> <li>3. This dataset available for analysis so we consider basic text analysis like word cloud</li> </ol>	

#### 5.1.6 QUERY DATA

<b>Use Case ID:</b>	UC11		
<b>Use Case Name:</b>	Query Data		
<b>Created By:</b>	Sonya Abbas	<b>Last Updated By:</b>	
<b>Date Created:</b>		<b>Last Revision Date:</b>	
<b>User Story ID:</b>	S32.2		
<b>Actors:</b>	User [Martin]		
<b>Description:</b>	This use case describes how the user uses TET to query a dataset so that he can obtain the correct or useful sets of data to do his analysis.		
<b>Trigger:</b>	The user wants to leverage open data use for facilitating co-creation activities for solving socio-economic problems. In order to acquire the right set data for the this purpose, Martin (the user) needs to query the datasets repository to get useful datasets for this task		
<b>Preconditions:</b>	<ol style="list-style-type: none"> <li>1. User has logged in</li> <li>2. User has chosen a dataset in an appropriate format (CSV, TSV, RDF)</li> </ol>		
<b>Postconditions:</b>	User writes queries in an easy and simple way and receives results		
<b>Normal Flow:</b>	<ol style="list-style-type: none"> <li>1. User chooses "QUERY DATA"</li> <li>2. System opens query builder interface</li> <li>3. System presents set of examples queries to help the user constructing his own query</li> <li>4. User writes query using the interface</li> <li>5. User click "RUN"</li> <li>6. System check the query</li> <li>7. System presents results to user</li> </ol>		
<b>Alternative Flows:</b>			
<b>Exceptions:</b>	5a. In step 5 of the normal flow, User writes invalid query <ol style="list-style-type: none"> <li>1. System will inform user</li> <li>2. User corrects his query</li> </ol> Use Case resumes on step 5		
<b>Includes:</b>	Integrate Data		
<b>Frequency of Use:</b>	30 per hour		
<b>Special Requirements:</b>	Usability – performance – speed – simplicity		
<b>Assumptions:</b>	User knows how to write a query		
<b>Notes and Issues:</b>			

#### 5.1.7 INTEGRATE A DATASET

<b>Use Case ID:</b>	UC12		
<b>Use Case Name:</b>	Integrate a Dataset		
<b>Created By:</b>	Sonya Abbas	<b>Last Updated By:</b>	
<b>Date Created:</b>		<b>Last Revision Date:</b>	
<b>User Story ID:</b>	S8.1		
<b>Actors:</b>	User [Civic Joe]		
<b>Description:</b>	This use case describes integration of datasets obtained from multiple sources into one systems in order to subject the unified dataset into other analysis or usage.		
<b>Trigger:</b>	User has the need to gather datasets from 3 locations on the subject of citizen participation in government. The aim is to compare the result of this type of open data use by citizens in different locations in order to		

	explain or support his argument for citizens' participation in or collaboration with the Public administrators in decision-making activities will result in better utilisation of public resource at the location of the user
<b>Preconditions:</b>	<ol style="list-style-type: none"> <li>1. User has logged in</li> <li>2. User has chosen the RDF dataset</li> </ol>
<b>Postconditions:</b>	Dataset integrated with the other content
<b>Normal Flow:</b>	<ol style="list-style-type: none"> <li>1. User chooses "INTEGRATE"</li> <li>2. System requires URI</li> <li>3. User provides URI of the dataset</li> <li>4. System checks the URI</li> <li>5. System checks the data quality</li> <li>6. System applies tagging and grouping</li> <li>7. System import the RDF data to the RDF store</li> <li>8. System returns "Integrated successfully" message</li> </ol>
<b>Alternative Flows:</b>	5a. In step 5 of the normal flow, if the user provides poor data doesn't pass quality checking <ol style="list-style-type: none"> <li>1. System will prompt user to check the data</li> <li>2. User checks the data and update it</li> <li>3. Use Case resumes on step 5 of normal flow</li> </ol>
<b>Exceptions:</b>	4a. In step 4 of the normal flow, User writes invalid URI <ol style="list-style-type: none"> <li>1. System informs user</li> <li>2. User corrects the URI</li> <li>3. Use Case resumes on step 4 of normal flow</li> </ol> 5a. In step 4 of the normal flow, datasets structures are incompatible and can't be aligned, e.g. missing columns or incorrect data types <ol style="list-style-type: none"> <li>1. System will inform user</li> <li>2. User corrects the dataset</li> <li>3. Use Case resumes on step 5 of normal flow</li> </ol>
<b>Includes:</b>	
<b>Frequency of Use:</b>	15 per hour
<b>Special Requirements:</b>	Interoperability support – Data Quality
<b>Assumptions:</b>	Vocabularies available
<b>Notes and Issues:</b>	Consider data integration for other formats – Triplesets for tagging and grouping (w3c)

#### 5.1.8 LINK A DATASET

<b>Use Case ID:</b>	UC14		
<b>Use Case Name:</b>	Link a Dataset		
<b>Created By:</b>	Sonya Abbas	<b>Last Updated By:</b>	
<b>Date Created:</b>		<b>Last Revision Date:</b>	
<b>User Story ID:</b>	S8.1		
<b>Actors:</b>	User [Civic Joe]		
<b>Description:</b>	This use case describes how the user links datasets following Linked Data principles. The system or users later will be able to use these links in order to navigate between related datasets. For example, if a new user chooses a linked dataset, he will see all related datasets (maybe as a graph) and will be able to navigate between them.		
<b>Trigger:</b>	User has the need to gather datasets from 3 locations on the subject of citizen participation in government. The aim is to compare the result of this type of open data use by citizens in different locations in order to explain or support his argument for citizens' participation in or collaboration with the Public administrators in decision-making activities will result in better utilisation of public resource		

	at the location of the user User chooses "LINK" functionality of the TET interface of TET/SPOD-enable Route-TO-PA platform to link the 3 datasets from the different locations together so that he could compare them
<b>Preconditions:</b>	<ol style="list-style-type: none"> <li>1. User has logged in</li> <li>2. User has chosen the RDF dataset.</li> </ol>
<b>Postconditions:</b>	User has linked the data
<b>Normal Flow:</b>	<ol style="list-style-type: none"> <li>1. User chooses "LINK"</li> <li>2. User selects datasets to link the data</li> <li>3. User defines the entities to be linked</li> <li>4. User defines the properties to be checked</li> <li>5. System reconcile the data</li> <li>6. System establish the links</li> <li>7. System stores the links</li> <li>8. System update the data with the linked version</li> </ol>
<b>Alternative Flows:</b>	
<b>Exceptions:</b>	
<b>Includes:</b>	
<b>Frequency of Use:</b>	Use as demanded
<b>Special Requirements:</b>	<p>System supportability for data linking using the Linked data principles</p> <p>Performance with speed and datqaset format based on standardised arrangments</p>
<b>Assumptions:</b>	There will sufficient and useful API for data linking operations
<b>Notes and Issues:</b>	

#### 5.1.1.9 ADD A DATASET TO COMPARE

<b>Use Case ID:</b>	UC15		
<b>Use Case Name:</b>	Add a Dataset to Compare		
<b>Created By:</b>	Sonya Abbas	<b>Last Updated By:</b>	
<b>Date Created:</b>		<b>Last Revision Date:</b>	
<b>User Story ID:</b>	S13.9		
<b>Actors:</b>	User [Antonio (Student leader)]		
<b>Description:</b>	This use case describes how the user selects datasets and places them inside the dataset analysis basket for later use either in analysis or for comparison purposes. It's a part of the dataset preparation activities for comparing or analysing datasets on the Route-TO-PA platform		
<b>Trigger:</b>	The user needs to compare the qualities of or other parameters of the various datasets he needs to write a report or other uses. So as he browses on the dataset catalogue of the platform, he selects and places the datasets into the analysis baskets for later comparison analysis to aid decision on suitability of dataset for the specific purpose		
<b>Preconditions:</b>	<p>User must have account on platform, and be logged into the system</p> <p>The functionality for dataset selection and placement in the analysis basket can be both:</p> <ol style="list-style-type: none"> <li>1. the drag-and-drop into the analysis basket type or</li> <li>2. the select and click analysis basket button.</li> </ol>		
<b>Postconditions:</b>	<p>The system should ready select and place items in the analysis basket</p> <p>The functionality should be easy to use and response fast enough</p>		
<b>Normal Flow:</b>	<ol style="list-style-type: none"> <li>1. Clicks of the dataset CATALOGUE button</li> <li>2. System opens the dataset page and displays datasets</li> </ol>		

	<ol style="list-style-type: none"> <li>2.1. User selects relevant datasets form the provided list.</li> <li>2.2. User clicks “add datasets”</li> <li>2.3. System added the ticked datasets to the “Analysis Basket”.</li> <li>3. User clicks on the dataset name to selects it</li> <li>4. System opens the dataset and displays these buttons: <ol style="list-style-type: none"> <li>4.1. ADD to analysis basket</li> <li>4.2. BACK (to return to previous screen without adding content)</li> </ol> </li> <li>5. User clicks on the ADD button</li> <li>6. System does the following: <ol style="list-style-type: none"> <li>6.1. System copies the dataset link into the “Analysis Basket” (Internal)</li> <li>6.2. System displays: <ol style="list-style-type: none"> <li>6.2.1. a notification: [Dataset successfully added to Analysis Basket]</li> <li>6.2.2. ADD MORE dataset button,</li> <li>6.2.3. OPEN Analysis Basket button, and</li> <li>6.2.4. DONE button</li> </ol> </li> </ol> </li> <li>7. User clicks on ADD MORE button</li> <li>8. System returns to Dataset catalogue screen</li> <li>9. Use case repeats steps 2 – 6</li> <li>10. User clicks on DONE button when done with selections</li> <li>11. System returns to initial dataset that was opened</li> </ol>
<b>Alternative Flows:</b>	<p>A) Dra-and-drop dataset into analysis basket while in the dataset catalogue window</p> <ol style="list-style-type: none"> <li>1. With left-button of the mouse, user drags dataset(s) from the list of the datasets on the catalogue window into the analysis basket and releases left-button of the mouse</li> <li>2. System copies dataset links into the analysis basket</li> </ol> <p>B) User is in the analysis basket screen and wishes to add datasets into the basket</p> <ol style="list-style-type: none"> <li>1. User clicks on the ANALYSIS BASKET button</li> <li>2. System opens the basket and displays: <ol style="list-style-type: none"> <li>a. Basket content (if any) as list of items previously saved there</li> <li>b. The following buttons to manage content:</li> <li>c. ADD MORE dataset button,</li> <li>d. REMOVE dataset button and</li> <li>e. CLOSE Analysis Basket button</li> </ol> </li> <li>3. User clicks on the ADD MORE to Analysis button</li> <li>4. System open dataset catalogue window</li> <li>5. Use selects the dataset of interest and clicks on ADD button</li> <li>6. System copies link to the dataset into the analysis basket</li> <li>7. Use case repeats steps 3 – 6 as desired by user</li> <li>8. User clicks DONE button</li> <li>9. System displays the content of Analysis basket</li> </ol>
<b>Exceptions:</b>	<p>A) User has selected unrelated dataset into the analysis basket and needs to remove it from the analysis basket.</p> <ol style="list-style-type: none"> <li>1. User clicks on the Analysis basket button</li> <li>2. System opens the basket and displays links to the datasets selected in the normal flow</li> <li>3. User clicks on the link to be removed</li> <li>4. System highlights the dataset</li> <li>5. User clicks on the REMOVE button</li> <li>6. System deletes the link from the list</li> <li>7. User clicks on the close button</li> <li>8. System returns to the Dataset catalogue window</li> </ol>

	B) In step 5 of the normal flow, user exceeds basket size 1. User clicks on the Analysis basket 2. System displays warning message [Analysis basket is full – delete some entries] ; OK button 3. User clicks on the Ok button 4. System open the Analysis basket 5. Use case continues from step 3 of the Exception flow (A)
<b>Includes:</b>	
<b>Frequency of Use:</b>	As required by user
<b>Special Requirements:</b>	Supportability for analysis basket, usability and user-friendliness
<b>Assumptions:</b>	Drag-and-drop functionality will be easily implementable
<b>Notes and Issues:</b>	The implementation of the Drag-and-drop functionality is to be decided

#### 5.1.10 COMPARE DATASETS

<b>Use Case ID:</b>	UC16		
<b>Use Case Name:</b>	Compare Datasets		
<b>Created By:</b>	Sonya Abbas	<b>Last Updated By:</b>	
<b>Date Created:</b>		<b>Last Revision Date:</b>	
<b>User Story ID:</b>	S13.9		
<b>Actors:</b>	User [Antonio (Student leader)]		
<b>Description:</b>	This use case describes how the user uses TET to compare datasets on the platform		
<b>Trigger:</b>	The user needs to decide on the appropriateness of the dataset under consideration for the suitability of the task he has to carry out with the datasets on the platform. User chooses to “Compare Data” two datasets to view their suitability for the task		
<b>Preconditions:</b>	1. User must own account on platform and be logged in 2. User must select the dataset to compare and save in the analysis basket or the datasets to compare were previously saved in his analysis basket		
<b>Postconditions:</b>	The system should easily compare the datasets with reasonable speed and present results in a user-defined formats e.g. tabular or chart format		
<b>Normal Flow:</b>	1. User open into the analysis basket and selects two datasets 2. User clicks on COMPARE datasets button 3. System requests web service of open source data analysis tool 4. System receives results 5. System displays results to the user in the user-defined format 6. User view result and saves the result or Prints it		
<b>Alternative Flows:</b>	4.a System returns Null/ datasets structures incompatible/ not able to be compared message 1. System informs the user 2. User update the chosen datasets 3. Use Case resumes on step 1 of normal flow		
<b>Exceptions:</b>			
<b>Includes:</b>	Add a dataset to compare		
<b>Frequency of Use:</b>	As required by user		
<b>Special Requirements:</b>	System support for dataset comparison using supplied standardised API Performance and speed User-friendliness of interface tools		

<b>Assumptions:</b>	
<b>Notes and Issues:</b>	Compare package in R, to be determined is the capability to compare more than 2 datasets at a time.

#### 5.1.11 VIEW A CHART

<b>Use Case ID:</b>	UC20		
<b>Use Case Name:</b>	View Chart		
<b>Created By:</b>	Sonya Abbas	<b>Last Updated By:</b>	
<b>Date Created:</b>		<b>Last Revision Date:</b>	
<b>User Story ID:</b>	S2.2		
<b>Actors:</b>	User [Resident Kay]		
<b>Description:</b>	This use case describes how the user uses TET to view the chart of a dataset		
<b>Trigger:</b>	User needs to visualise the dataset in a manner that is easily comprehensible. chooses "View Chart"		
<b>Preconditions:</b>	<ol style="list-style-type: none"> <li>1. User has logged in</li> <li>2. User has chosen a dataset to view</li> </ol>		
<b>Postconditions:</b>	User sees chart visualization of the dataset		
<b>Normal Flow:</b>	<ol style="list-style-type: none"> <li>1. User selects a dataset to view on the chart</li> <li>2. System displays the dataset</li> <li>3. User chooses "VIEW CHART"</li> <li>4. System asks user to determine a factor variable</li> <li>5. User chooses variable from the dataset</li> <li>6. System checks the dataset</li> <li>7. System requests a web service</li> <li>8. System receives pie chart visualization</li> <li>9. System display results to the user</li> </ol>		
<b>Alternative Flows:</b>	<ol style="list-style-type: none"> <li>2a. In step 5 of the normal flow, if the user fails to choose variable factors <ol style="list-style-type: none"> <li>1. System automatically chooses first factor variable</li> <li>2. Use Case resumes on step 6 of normal flow</li> </ol> </li> </ol>		
<b>Exceptions:</b>	<ol style="list-style-type: none"> <li>4a. In step 4 of the normal flow, no data available for this variable <ol style="list-style-type: none"> <li>1. System will inform the user</li> <li>2. System will ask user to change the variable</li> <li>3. Use Case resumes on step 3</li> </ol> </li> <li>5a. In step 5 of the normal flow, Web service is down <ol style="list-style-type: none"> <li>1. System will inform the user</li> <li>2. System will ask user to try again later</li> <li>3. User tries again</li> <li>4. Use Case resumes on step 5</li> </ol> </li> </ol>		
<b>Includes:</b>			
<b>Frequency of Use:</b>	According to demand by users		
<b>Special Requirements:</b>	Performance – speed – simplicity		
<b>Assumptions:</b>	There is factor variable in the dataset		
<b>Notes and Issues:</b>			

#### 5.1.1.12 VIEW INFOGRAPHIC

<b>Use Case ID:</b>	UC21		
<b>Use Case Name:</b>	View Infographic		
<b>Created By:</b>	Sonya Abbas	<b>Last Updated By:</b>	
<b>Date Created:</b>		<b>Last Revision Date:</b>	
<b>User Story ID:</b>	S2.2		
<b>Actors:</b>	User		
<b>Description:</b>	This use case describes how the user uses TET to view infographic of a dataset		
<b>Trigger:</b>	User chooses "View Infographic"		
<b>Preconditions:</b>	<ol style="list-style-type: none"> <li>1. User has logged in</li> <li>2. User has chosen a dataset to view</li> </ol>		
<b>Postconditions:</b>	User sees infographic visualization of the dataset		
<b>Normal Flow:</b>	<ol style="list-style-type: none"> <li>1. User chooses "VIEW INFOGRAPHIC"</li> <li>2. System checks the dataset</li> <li>3. System requests a web service</li> <li>4. System receives infographic</li> <li>5. System display results to the user</li> </ol>		
<b>Alternative Flows:</b>			
<b>Exceptions:</b>	<ol style="list-style-type: none"> <li>3a. In step 3 of the normal flow, Web service is down <ol style="list-style-type: none"> <li>1. System will inform the user</li> <li>2. System will ask user to try again later</li> <li>3. User tries again</li> <li>4. Use Case resumes on step 3</li> </ol> </li> </ol>		
<b>Includes:</b>			
<b>Frequency of Use:</b>	Based on demand by users		
<b>Special Requirements:</b>	Support for system tools, speed and user friendliness		
<b>Assumptions:</b>	Performance – speed – simplicity		
<b>Notes and Issues:</b>			

## 5.2 SPOD USE CASES

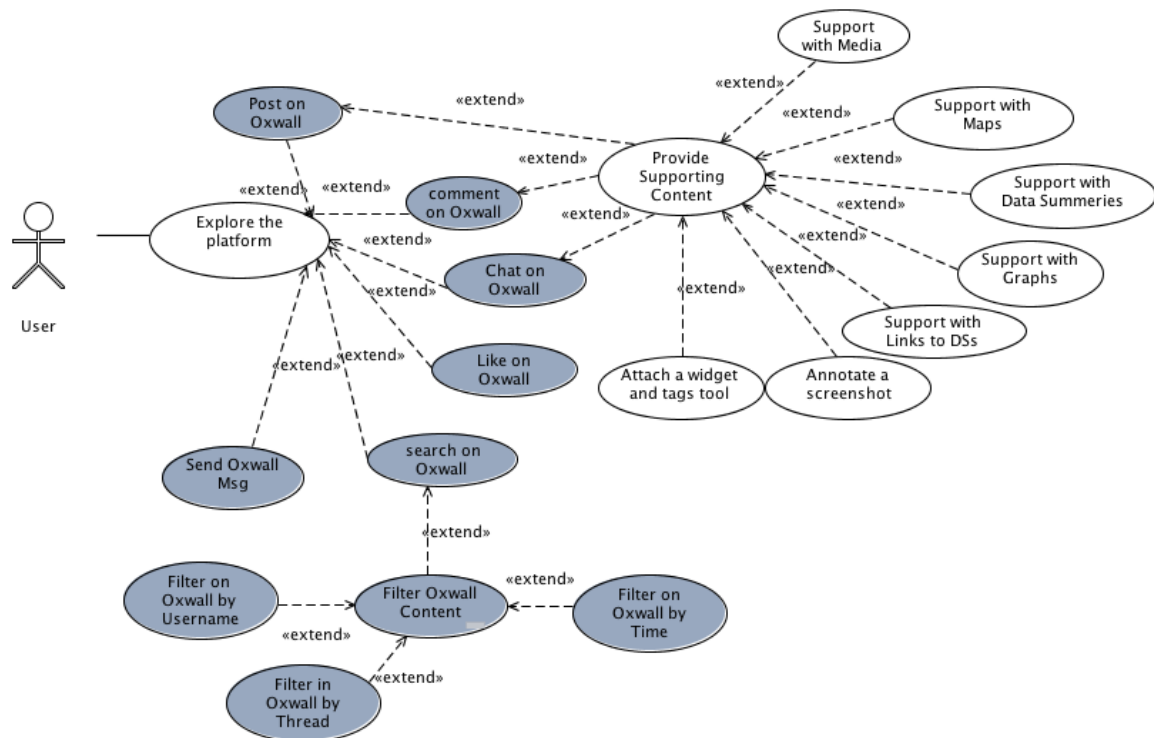


Figure 4: SPOD USE-CASE DIAGRAM

### 5.2.1 PROVIDE SUPPORTING CONTENT ON SPOD POST

<b>Use Case ID:</b>	UC4(A)		
<b>Use Case Name:</b>	Attach a File as Support Content on SPOD Post		
<b>Created By:</b>	E. Osagie	<b>Last Updated By:</b>	
<b>Date Created:</b>	18/08/2015	<b>Last Revision Date:</b>	
<b>User Story ID:</b>	s2.3. Other similar user stories: 1. s1.2 – relates to inserting and sharing media file on SPOD post 2. s2.4 – relates to sharing data (files) and with comments on SPOD 3. s6.3 – relates to sharing annotated file on SPOD post 4. s14.1 – relates to sharing files on SPOD post All these stories are about providing supporting content by attaching a file or link on SPOD post on Oxwall and they use same use case as this use case.		
<b>Actors:</b>	User (Resident Kay) Other actors in similar user stories: Jane (Dublin PA), Antonio (Student leader) and Students (Prato)		
<b>Description:</b>	In each of the related user stories shown above, the user which could be any of the actors involved, is sending a SPOD post on Oxwall and is inserting/attaching either one or more of the files to support his argument (or as a point of information) on the SPOD conversation with the members of his network. This use case shows how the user can, from the point of composing a message, attempt to utilize the supporting content (file) options along with the post. The System allows the user to choose from his content via saved items window.		

	SPOD supports the attachment of files, such as, images, pdf and word documents. The number of attachment of datasets directly on SPOD has a threshold, however the user can share a link to a dataset stored on TET, CKAN or some other source in according to the UC4(B) and UC5.
<b>Trigger:</b>	Resident Kay (user) is involved in her local community activities and wants to put her issues on a public platform, to share and find out about local news, to discuss with other local residents and have an input into what is happening in her community. She would like to deliver meaningful ideas to public administrators and to build local social networks to highlight the good things that are happening in her community and perhaps to start up a skill-share or local volunteering exchange programme. Resident Kay is exploring Open Data resources to tackle community development problems on Orphanage home management and sponsorship by seeking volunteering staff. To do this Kay is using contents obtained from OD platform to enrich and support her request, explanations, etc. to her network on SPOD.
<b>Preconditions:</b>	<p>These conditions must be met before Resident Kay (user) can be able to support his SPOD comments/post with extra content or file:</p> <ol style="list-style-type: none"> <li>1. User (Kay) must own an account on Platform</li> <li>2. User must be logged on to the platform in a device – desktop, laptop or mobile devices</li> <li>3. User must be in either of these windows: <ol style="list-style-type: none"> <li>a. Data Analysis window (on TET)</li> <li>b. Compose a post window (on SPOD via Oxwall)</li> </ol> </li> <li>4. User must save his content file on his account on the platform or other drives such as cloud storage, local PC drive, and mobile devices e.g. tablets and smartphones to support SPOD post. the user account can access TET/SPOD-enabled CKAN platform and from which the user is attempting to achieve his goal in this use case.</li> </ol>
<b>Postconditions:</b>	<p>These will occur once the content file is attached/inserted into the post ready to be sent to the network members:</p> <ol style="list-style-type: none"> <li>1. If the user is in the ‘Saved Items’ window in the user account on platform and from here sends the file to SPOD interface: <ol style="list-style-type: none"> <li>a. System will automatically export file to SPOD once user clicks on SHARE button after selecting the file,</li> <li>b. System will automatically create a message box on SPOD (ready for user to compose a message) and</li> <li>c. System will attach the file to the post.</li> </ol> </li> <li>2. If user is in the ‘message box’ in the SPOD interface already composing a message and from here decides to insert file to support the message by clicking on the INSERT button: <ol style="list-style-type: none"> <li>a. System will ask user to select source of item to attach</li> <li>b. Once user chooses a file, system will auto-switch back into the messaging window on SPOD so that user can continue</li> </ol> </li> </ol>
<b>Normal Flow:</b>	<p>User is in the ‘MESSAGEBOX’ on SPOD composing a message then decides to support his message with content saved in his account:</p> <ol style="list-style-type: none"> <li>1. User clicks on INSERT a file(s) button next to the message box</li> <li>2. System presents folder menu for user to select location of the file(s)</li> <li>3. User selects SAVED ITEMS window on the platform</li> <li>4. System auto-switches window into the SAVED ITEMS window of the user account on platform</li> <li>5. User selects file(s) from SAVED ITEMS window and clicks on ATTACH file button after the selection.</li> <li>6. System auto-switches back to the ongoing message box in SPOD (where user was) and attach selected file</li> <li>7. User completes message writing and clicks on POST/SEND button to send the message to network members.</li> </ol>
<b>Alternative Flows:</b>	<p>A) User is in the ‘Saved Items’ window in the user account on platform and decides to use a save file(s) to support an argument, comment or explanation on SPOD:</p> <ol style="list-style-type: none"> <li>1. User clicks on the name of file he wants to share</li> <li>2. System displays a window with sending options – Via SPOD or EMAIL and ATTACH button</li> <li>3. User selects SPOD and clicks on ATTACH button</li> <li>4. System auto-switches to a new MESSAGEBOX in SPOD and attaches selected files</li> <li>5. User types his message inside the message box.</li> <li>6. User clicks on POST/SEND button to send the message to network members.</li> <li>7. System sends message with the attached file – messagebox disappears</li> <li>8. System return to saved items screen</li> </ol>

<b>Exceptions:</b>	4.a File size limit exception <ol style="list-style-type: none"> <li>1. System informs the user</li> <li>2. System asks user to choose another file</li> <li>3. User changes the chosen file</li> <li>4. Use Case resumes on step 2</li> </ol>
<b>Includes:</b>	The following use cases are relevant to this particular use case. However, they are not represented in this documentation because <i>the functionalities are already existing on Oxwall (<a href="http://www.oxwall.org/">http://www.oxwall.org/</a>) which is to hosts SPOD:</i> <ol style="list-style-type: none"> <li>1. Post on Oxwall</li> <li>2. Comment on Oxwall</li> <li>3. Chat on Oxwall</li> </ol>
<b>Frequency of Use:</b>	On Demand
<b>Special Requirements:</b>	<ol style="list-style-type: none"> <li>1. Supportability for the file attachment functionalities</li> <li>2. Accessibility</li> <li>3. Usability of the system for the purpose</li> <li>4. Performance (speed)</li> <li>5. Support for storage space for files</li> <li>6. Seamless switching by the system between TET and SPOD interfaces</li> </ol>
<b>Assumptions:</b>	System capability to switch between SPOD to TET seamlessly unnoticed by user.
<b>Notes and Issues:</b>	<ol style="list-style-type: none"> <li>1. The file that user selects to use as a support for his message could be any of the alternative files (word, pdf, excel, jpg, video, audio, etc.) which could be about data summary, media content, map, annotated file, graphically visualized content that were previously saved to the user's account.</li> <li>2. To be determined: <ol style="list-style-type: none"> <li>a. Location of the user's saved items – in the account online in TET or SPOD? or</li> <li>b. Will a single account be maintained for all saved items from TET and SPOD? or</li> <li>c. Will multiple accounts that sync together be maintained?</li> <li>d. Limit X of file size that user can attach to each SPOD post</li> <li>e. If links to datasets are saved on account, they can be selected and used together with files to support one post.</li> <li>f. Possibility to send files and links without first saving it on user's account</li> </ol> </li> </ol>

### 5.2.2 SHARE A DATASET WITH A VISUALISATION ON SPOD

<b>Use Case ID:</b>	UC4(B)		
<b>Use Case Name:</b>	Share a dataset with a visualisation as Support Content on SPOD Post		
<b>Created By:</b>	E. Osagie	<b>Last Updated By:</b>	
<b>Date Created:</b>	18/08/2015	<b>Last Revision Date:</b>	
<b>User Story ID:</b>	S2.1 Also S2.2		
<b>Actors:</b>	Resident Kay (User)		
<b>Description:</b>	The user creates a dataset graphical representation (e.g., a chart) and posts it on SPOD. The dataset graphical representation (e.g., chart) is accessible also for users with visual deficiencies. User shares the graphical representations with network members as support for his explanations.		
<b>Trigger:</b>	User wants to support his SPOD post with easy-to-understand visual explanations of his ideas		
<b>Preconditions:</b>	These conditions must be met before the user can be able to use visualised graphs to support his SPOD comments/post with a visualisation: <ol style="list-style-type: none"> <li>1. User must own an account on Platform</li> <li>2. User must be logged on to the platform in a device – desktop, laptop or mobile devices</li> <li>3. User must be in the compose a post window</li> <li>4. Dataset to use to support SPOD post must be located on TET, CKAN or some other source and the user has the link (URL) to it</li> </ol>		

<b>Postconditions:</b>	These will occur once the user confirms the post: <ol style="list-style-type: none"> <li>1. User must be able to choose a visualisation for the dataset</li> <li>2. User must be able to create the post on SPOD</li> <li>3. The post must be available for other users of SPOD and other users of the open data apps especially the target audience for possible discussion and contribution</li> <li>4. Other users can easily reuse the visualisation, the dataset or both in their own social activities</li> </ol>
<b>Normal Flow:</b>	User is in the 'MESSAGEBOX' on SPOD composing a message then decides to support his message with a dataset visualisation: <ol style="list-style-type: none"> <li>1. User clicks on INSERT a dataset visualisation button next to the message box</li> <li>2. System shows a dataset link textbox to provide the link to the dataset</li> <li>3. User pastes the link to dataset or drags and drops it</li> <li>4. The system reads the dataset directly from the source; it presents the dataset content showing additional information on the dataset (e.g., dataset quality, etc.)</li> <li>5. The system proposes a basket of visualisations to the user</li> <li>6. User chooses the visualisation to represent the dataset content</li> <li>7. User applies filters on the dataset</li> <li>8. User completes the post by writing a message and clicks on POST/SEND button to send the message to network members.</li> </ol>
<b>Alternative Flows:</b>	Adapt visualisations for users with visual deficiencies: <ol style="list-style-type: none"> <li>5. The user has indicated in his profile the visual deficiencies. The system reads the dataset directly from the source and presents the dataset content and a basket of visualisations to the user. In order to have visualisations accessible for users with visual deficiency (e.g., colour blindness, low vision, etc.), the system accesses to the user profile and propose accessible visualisation.</li> <li>6. Use Case resumes on step 6 of normal flow</li> </ol>
<b>Exceptions:</b>	Error message will occur if the user attempts to insert a link that is not a valid dataset. At step 4 of normal flow, user pastes a link to an invalid dataset: <ol style="list-style-type: none"> <li>5. System displays warning message [Invalid link to dataset. OK]</li> <li>6. User clicks on OK button</li> <li>7. System returns to <ol style="list-style-type: none"> <li>a. Step 2 of normal flow and clears the link text box</li> </ol> </li> </ol>
<b>Includes:</b>	The following use cases are relevant to this particular use case. However, they are not represented in this documentation because <i>the functionalities are already existing on Oxwall (<a href="http://www.oxwall.org/">http://www.oxwall.org/</a>) which is to host SPOD:</i> <ol style="list-style-type: none"> <li>4. Post on Oxwall</li> <li>5. Comment on Oxwall</li> <li>6. Chat on Oxwall</li> </ol>
<b>Frequency of Use:</b>	On Demand
<b>Special Requirements:</b>	<ol style="list-style-type: none"> <li>1. Accessibility</li> <li>2. Usability of the system for the purpose</li> <li>3. Performance (speed)</li> </ol>
<b>Assumptions:</b>	
<b>Notes and Issues:</b>	

### 5.2.3 ATTACH WIDGETS AND TAGS TOOLS ON SPOD FORUM

<b>Use Case ID:</b>	UC7		
<b>Use Case Name:</b>	Attach Widgets and Tag Tools on SPOD Forum		
<b>Created By:</b>	E. Osagie	<b>Last Updated By:</b>	
<b>Date Created:</b>	22/08/2015	<b>Last Revision Date:</b>	
<b>User Story ID:</b>	s31.1		
<b>Actors:</b>	Henk (Entrepreneur)		

<b>Description:</b>	User (Henk – Entrepreneur) creates a Forum on SPOD and wants participants in the forum to vote on issues under discussion in the forum. Henk attaches the voting widgets: e.g. “Like”, “Dislike”, “Rate with up/down arrows”, “Don’t know”, “For”, “Against”, etc. Henk wants to be able to get statistical analysis of the result of the participant’s vote.
<b>Trigger:</b>	Henk is an entrepreneur who is dealing with the consequences of population decline in Ulrum. Henk is involved in project Ulrum 2034, aimed at making sure that Ulrum remains a pleasant place to live and work in. Henk is planning to write a livability plan in collaboration with other citizens. This plan will concern various policy topics: culture, tourism and economic matters, health and youth facilities. In order to write his plan, he is searching for information that can help him map the problems in the region and find solutions. Henk would like to get in touch with local actors, such as citizens, entrepreneurs, but also governments and universities are willing to help with writing and implementing the plan. Henk wants to use SPOD forum to facilitate the process of gathering ideas and information, select the best ideas through popular votes by contributors to arrive at the best initiatives for the community problem.
<b>Preconditions:</b>	<ol style="list-style-type: none"> <li>1. Log into SPOD</li> <li>2. Create a forum</li> <li>3. Once a forum is created, system will present CUSTOMISE forum button to user</li> <li>4. When user clicks on CUSTOMISE button, system will activate tools: [tags, icons, text field, checkboxes, dropdown menus, widgets: e.g. “Like”, “Dislike”, “Rate with up/down arrows”, “Yes”, “No”, “Don’t know”, “For”, “Against” for user to customise the forum and request participant to vote on issues that user presents to them on the forum</li> </ol>
<b>Postconditions:</b>	<ol style="list-style-type: none"> <li>1. Customisation of Forum will activate tools: [tags, icons, text field, checkboxes, dropdown menus, widgets: e.g. “Like”, “Dislike”, “Rate with up/down arrows”, “Don’t know”, “For”, “Against”, and make available to potential participants to cast their votes on a given issue/question as prepared by the forum moderator or creator]</li> <li>2. System will record some non-personal profile data of participants along with their votes e.g. occupation, location (city/country), age, sex, marital status, etc. – details by which the participant cannot be identified.</li> <li>3. System will provide user with tools to collate and analyse the vote result and prepare report and visualization of the votes.</li> </ol>
<b>Normal Flow:</b>	<p>Once user have created a forum:</p> <ol style="list-style-type: none"> <li>1. User clicks on the CUSTOMISE forum button</li> <li>2. System presents forum customization form containing various tools: [tags, icons, textbox, checkboxes, dropdown menus, widgets: e.g. “Like”, “Dislike”, “Rate with up/down arrows”, “Don’t know”, “For”, “Against” for user to customise the forum.</li> <li>3. User types a short proposal or question or information (a motion – the subject for voting) in the TEXTBOX and clicks on ADD WIDGET button</li> <li>4. System presents a POP-UP WINDOW with dropdown menu of widgets [checkboxes, “Like”, “Dislike”, “Rate with up/down arrows”, “For”, “Against”]</li> <li>5. User selects a widget button as response options, then clicks OK</li> <li>6. System presents a set of choices (such as deadline for the voting/ display current vote status/ send voting results to participants/edit the vote) for the creator to choose</li> <li>7. User chooses the required setting he desires and click ok</li> <li>8. System closes the POP-UP WINDOW [Internal: system records the entries, then arranges the YES, NO and DON’T KNOW buttons next to the proposal as voting options]</li> <li>9. System presents a DIALOGUEBOX with a message CREATE ANOTHER ENTRY – OK / DONE</li> <li>10. User clicks on OK button</li> </ol> <p>Use case goes through the cycle of step 2 to step 7 until user is done with issues to be voted for in the forum</p> <ol style="list-style-type: none"> <li>11. At step 7, User clicks on DONE button instead of OK</li> <li>12. System displays all entries and a DIALOGUEBOX options: ADD   EDIT   POST to add more entries for voting, to edit existing entries or to post the existing entries respectively</li> <li>13. User clicks on POST</li> <li>14. System sends post to network participants and displays notification [Message posted]</li> </ol>
<b>Alternative Flows:</b>	<p>A) User decides to edit entries before sending:</p> <ol style="list-style-type: none"> <li>1. At step 10, User clicks on EDIT button</li> <li>2. System presents:</li> </ol>

	<ol style="list-style-type: none"> <li>a. EDIT and DELET buttons</li> <li>b. Some text portion of each of the different entries</li> <li>3. Selects an entry line</li> <li>4. System opens the entry</li> <li>5. User edits the entry and clicks on OK button</li> <li>6. System returns to step 10 of normal flow</li> </ol>
<b>Exceptions (errors):</b>	<p>Assume maximum issues for voting to be entered per post is fixed at 3 and user has already entered 3 issues:</p> <p>At step 9 of the normal flow:</p> <ol style="list-style-type: none"> <li>1. User clicks on ADD button</li> <li>2. System displays a WARNING dialogue box with message [Limit for voting is reached. EDIT   POST]</li> </ol> <p>A) User wants to edit existing post by deleting one of the existing post before adding another:</p> <ol style="list-style-type: none"> <li>1. User clicks on EDIT</li> <li>2. System returns to step 2 of the Alternative Flow (A)</li> <li>3. User clicks on X button to delete the issues no very relevant</li> <li>4. System deletes the line</li> <li>5. User clicks on ADD button</li> <li>6. System returns to step 2 of normal flow</li> <li>7. Use case continues from step 3 to step 12 of normal flow</li> </ol> <p>B) User decides to post the 3 already entered issues:</p> <ol style="list-style-type: none"> <li>1. User clicks on POST</li> <li>2. System sends post to network for participants to read and vote and displays notification [Message posted]</li> </ol>
<b>Includes:</b>	<ol style="list-style-type: none"> <li>1. Login</li> <li>2. Create post</li> </ol>
<b>Frequency of Use:</b>	ON Demand
<b>Special Requirements:</b>	<ol style="list-style-type: none"> <li>1. Usability</li> <li>2. Performance</li> <li>3. Support for the voting tools and tags</li> <li>4. User friendliness</li> <li>5. Ease of learning – learnability</li> <li>6. Supportability for network members at a time – server capacity</li> </ol>
<b>Assumptions:</b>	System will support use of voting tools to create a more superior voting functionality better than that on Facebook (Like, Dislike)
<b>Notes and Issues:</b>	<p>To be determined include:</p> <ol style="list-style-type: none"> <li>1. Limit of voting issues per post to be entered by user</li> <li>2. Scalability of voting issues per post</li> </ol>

#### 5.2.4 VOTING ON SPOD FORUM

<b>Use Case ID:</b>	UC9		
<b>Use Case Name:</b>	Network Members Vote on SPOD Forum		
<b>Created By:</b>	E. Osagie	<b>Last Updated By:</b>	
<b>Date Created:</b>	24/08/2015	<b>Last Revision Date:</b>	
<b>User Story ID:</b>	s2.6		
<b>Actors:</b>	User (Network Member) in a SPOD forum		
<b>Description:</b>	A network member uses the voting tools on SPOD to vote in response to voting call made on SPOD by the user.		
<b>Trigger:</b>	Resident Kay who is involved in her local community issues. As a concerned citizen she wants an easy way to put her issues on a public platform, to share and find out about local news, to discuss with other local		

	residents and have an input into what is happening in her community. She would like a meaningful exchange with public administrators and to build local social networks to highlight the good things that are happening in her community and perhaps to start up a skill-share/ local volunteering exchange. Based on this, she puts up a SPOD forum and asks participants to vote on issues she outlined on the SPOD post. In this use case, a user (participant in the forum, a Network member) votes in response to Resident Kay's post using the voting widgets provided by the Kay using the SPOD tools.
<b>Preconditions:</b>	To vote on SPOD, User (network member) must: <ol style="list-style-type: none"> <li>1. Own an account on SPOD</li> <li>2. Must be logged in to SPOD interface</li> <li>3. Must open into the specific discussion (forum) on SPOD</li> <li>4. System must present voting tools and widgets (activated by the forum creator) to the user (voter or network member) who is expected to vote</li> <li>5. A forum must be created by the forum creator</li> </ol>
<b>Postconditions:</b>	<ol style="list-style-type: none"> <li>1. System must record or save individual voter's (network member's) vote on the platform</li> <li>2. System must support voting record with non-personal data of the voter and present same to the forum creator for statistical analysis of the votes obtained from network members</li> </ol>
<b>Normal Flow:</b>	<ol style="list-style-type: none"> <li>1. User opens into the forum that contains the issues to be voted on as prepared by the creator</li> <li>2. System displays issues to be put into vote and the voting widgets/tag [FOR   AGAINST] enabled by the forum creator from the list of other voting tools [checkboxes, "Like", "Dislike", "Rate with up/down arrows", "For", "Against"]</li> <li>3. System displays how many the forum had been viewed</li> <li>4. User clicks on FOR button (or tag) to select his vote option for the specific issue under vote</li> <li>5. System records the user's vote as one count of a 'FOR' votes</li> <li>6. System presents a confirmation window to the user</li> <li>7. User confirms his action</li> <li>8. System DEACTIVATES other vote options for that issue to eliminate multiple votes for same issue.</li> <li>9. User clicks on SEND button to send vote to the network members</li> </ol>
<b>Alternative Flows:</b>	None
<b>Exceptions:</b>	None
<b>Includes:</b>	<ol style="list-style-type: none"> <li>1. Login use case</li> </ol>
<b>Frequency of Use:</b>	On demand
<b>Special Requirements:</b>	<ol style="list-style-type: none"> <li>1. System support for voting functionalities</li> <li>2. Integrity – adherence to data protection and privacy laws</li> <li>3. Support for network size for SPOD activities at any one moment</li> <li>4. Navigability and learnability</li> <li>5. Interface Simplicity and User friendliness</li> </ol>
<b>Assumptions:</b>	<ol style="list-style-type: none"> <li>1. It is assumed that voting on Open data supported forums or voting on open data driven platform will be more than just the type of voting functionality obtainable on other social media platform such the 'Like it', 'Plus one' functionalities found on Facebook and Google plus social media respectively.</li> <li>2. The SPOD interface on the TET/SPOD-enabled CKAN platform will support a range of voting tools capable of being used to design voting functionalities that are similar to survey questionnaire.</li> <li>3. Voters' login data will be recorded along with the votes they cast to improve analysis of the vote and deduction of meaningful information from the analysis: <ol style="list-style-type: none"> <li>a. Participants' (users') names and pictures will be exclude from the records of vote to remove personal identification</li> <li>b. Other profile details such as sex, age, location (city), marital status, occupation; other social preferences/statuses will be recorded along with their responses.</li> </ol> </li> </ol>
<b>Notes and Issues:</b>	To be decided or determined: <ol style="list-style-type: none"> <li>1. Tools for voting on SPOD taken from this list - checkboxes, "Like", "Dislike", "Rate with up/down arrows", "Yes", "No", "For", "Against"</li> <li>2. Supportability for a given level of users number at a time</li> <li>3. What data of the voters should be recorded with the votes they cast on SPOD forum?</li> </ol>

#### 5.2.5 RECEIVE NOTIFICATION FOR NEW DATASETS

<b>Use Case ID:</b>	UC18		
<b>Use Case Name:</b>	Receive Notification for New Datasets		
<b>Created By:</b>	Sonya Abbas	<b>Last Updated By:</b>	UNISA
<b>Date Created:</b>		<b>Last Revision Date:</b>	
<b>User Story ID:</b>	S3.1		
<b>Actors:</b>	User [Annie (Entrepreneur) Dublin]		
<b>Description:</b>	This use case describes how the user subscribes to receive datasets notifications. She can receive notifications of new datasets from everybody, her SPOD friends, and for a specific topic she is participating. In order to filter the notifications, the user eventually can provide specific keywords to receive notifications for relevant datasets.		
<b>Trigger:</b>	User chooses "Receive Notification"		
<b>Preconditions:</b>	1. User has logged in		
<b>Postconditions:</b>	User receives notifications of new datasets		
<b>Normal Flow:</b>	<ol style="list-style-type: none"> <li>1. User chooses "Receive Notification"</li> <li>2. User can choose to receive notifications from "everybody's dataset", "my friends' datasets", "my topic dataset". In addition, if the user has an account on TET (or on others compatible platforms), the user can choose to receive notifications for uploaded datasets.</li> <li>3. System add user to the list of "users asked for notification"</li> <li>4. System gets a new dataset</li> <li>5. System sends alerts to all users in list</li> </ol>		
<b>Alternative Flows:</b>	2a. In step 2 of the normal flow, if user exists in list Use Case resumes on step 4 of normal flow		
<b>Exceptions:</b>			
<b>Includes:</b>			
<b>Frequency of Use:</b>	Based user demand		
<b>Special Requirements:</b>	Integration and synchronisation with possibilities with existing social media platform, supportability with SPOD networking system/interface		
<b>Assumptions:</b>	Facebook and email systems will be integrated into TET/SPOD-enabled Route-TO-PA platform		
<b>Notes and Issues:</b>	Short Message Service (SMS) to be considered as option for notification		

#### 5.2.6 POST ON SPOD

<b>Use Case ID:</b>	UC22		
<b>Use Case Name:</b>	Post on SPOD		
<b>Created By:</b>	Samuel Adebayo	<b>Last Updated By:</b>	
<b>Date Created:</b>	20/08/2015	<b>Last Revision Date:</b>	
<b>User story ID:</b>	S28.3		
<b>Actors:</b>	User – (Ben)		
<b>Description:</b>	User tries to express his ideas to entrepreneurs in Groningen area through creation of a post on SPOD. This will enable other SPOD users especially the target ones to view the post and can possibly start an interactive discussion based on his ideas.		
<b>Trigger:</b>	There is a social economical problem which affects the entrepreneurs in that area which needs to be addressed through leveraging the accessibility of open data		

<b>Preconditions:</b>	<ol style="list-style-type: none"> <li>1. User must be a registered user of SPOD and TET platform</li> <li>2. User needs to create a profile and have a personal login details (username and password)</li> <li>3. User needs an internet connection for accessibility of the platform</li> </ol>
<b>Postconditions:</b>	<ol style="list-style-type: none"> <li>1. Once logged in, user system should be able to locate and present threads of existing or previous posts.</li> <li>2. User must be able to create the post on the open data app and send the post</li> <li>3. The post must be available to other users of the open data apps especially the target audience for possible discussion and contribution</li> </ol>
<b>Normal Flow:</b>	<ol style="list-style-type: none"> <li>1. User browses the SPOD platform</li> <li>2. User login with his personal details</li> <li>3. Platform validates if user is a registered user</li> <li>4. User selects Dutch government business support thread</li> <li>5. User creates a post to communicate his ideas</li> <li>6. The post becomes available for other users to view, comment and discuss</li> </ol>
<b>Alternative Flows:</b>	<p>User is not a registered platform user but is attempting to participate in SPOD interactive discussions</p> <ol style="list-style-type: none"> <li>1. User browses the SPOD interface and clicks on forum discussion topic</li> <li>2. System prompt user to login or register before creating a post</li> <li>3. User clicks on “OK” button</li> <li>4. System presents login form</li> <li>5. User enters all required details and clicks on “LOGIN” button</li> <li>6. User accepts user details and logs user into the system</li> <li>7. Use case continues from step 4 of normal flow.</li> </ol>
<b>Exceptions:</b>	
<b>Includes:</b>	Step 1-4 in the normal flow would be required for all types open – data platform to access all the features.
<b>Frequency of Use:</b>	
<b>Special Requirements:</b>	Usability, which enhances platform to be simple and easy to use.
<b>Assumptions:</b>	User must be able to use platform in a preferred and comfortable language
<b>Notes and Issues:</b>	What is the maximum and combination of characteristic of password that a use can have

## 5.2.7 ADD AN EVENT

<b>Use Case ID:</b>	UC26		
<b>Use Case Name:</b>	Add an event		
<b>Created By:</b>	UNISA	<b>Last Updated By:</b>	
<b>Date Created:</b>	17/09/2015	<b>Last Revision Date:</b>	
<b>Needs of stakeholders:</b>	<p>Needs of stakeholders took from Table 4 - D2.2</p> <ul style="list-style-type: none"> <li>• (Dublin) report on local events &amp; initiative;</li> <li>• (Dublin) events in neighbourhood (e.g., road works, environmental projects, information on grants)</li> <li>• (Dublin) events happening in the area – entertainment, sporting, charity</li> <li>• (Dublin) information about free events and community venues/resources so that I can meet people in person</li> <li>• (Dublin) calendar of events to get people informed involved</li> </ul>		
<b>Actors:</b>	User (Citizen/PA)		
<b>Description:</b>	User shares an on-line/off-line event on SPOD to inform, involve and comment with other community users. Events are physically located in the neighbourhood and SPOD users can contribute with discussions and information.		
<b>Trigger:</b>	User chooses “Add event”		
<b>Preconditions:</b>	<ol style="list-style-type: none"> <li>1. User must be a registered user of SPOD and TET platform</li> <li>2. User needs creates a profile and have a personal login details (username and password)</li> <li>3. User needs an internet connection for accessibility of the platform</li> </ol>		
<b>Postconditions:</b>	<ol style="list-style-type: none"> <li>1. The user successfully created the event;</li> </ol>		

	<ol style="list-style-type: none"> <li>The system will show the events in the section “Upcoming”;</li> <li>Other users can comment and post material in the event page</li> </ol>
<b>Normal Flow:</b>	<ol style="list-style-type: none"> <li>The user clicks on the “Create new Event” button</li> <li>The system shows a form with details to create the event</li> <li>The user fills out the form providing a title for the event, Date &amp; time, a description and eventually a location;</li> <li>Optionally, the user can decide to provide additional material, reference documents, link to data set</li> <li>The user clicks on the “Add” button to confirm the event creation</li> </ol>
<b>Alternative Flows:</b>	
<b>Exceptions:</b>	
<b>Includes:</b>	
<b>Frequency of Use:</b>	On demand
<b>Special Requirements:</b>	Usability that enhance platform to be simple and easy to use.
<b>Assumptions:</b>	
<b>Notes and Issues:</b>	

#### 5.2.8 CREATE A NEW TOPIC ENABLING AN ANONYMOUS POSTING

<b>Use Case ID:</b>	UC27		
<b>Use Case Name:</b>	Create a new topic enabling the anonymous posting		
<b>Created By:</b>	UNISA	<b>Last Updated By:</b>	
<b>Date Created:</b>	18/09/2015	<b>Last Revision Date:</b>	
<b>User Story ID/Needs of stakeholders:</b>	<p>User Story:</p> <ul style="list-style-type: none"> <li>Scenario: 9.Dublin.Civic HackerJoe.3: Joe creates a new forum and customises it for participants to be able to personalise their details including using anonymous names.</li> </ul> <p>Needs of stakeholders took from Table 4 - D2.2</p> <ul style="list-style-type: none"> <li>(Dublin) Pull in social media profile or remain anonymous</li> <li>(Dublin) enable users to choose which activity to make private or leave public on platforms</li> </ul>		
<b>Actors:</b>	Joe (Civic Hacker)		
<b>Description:</b>	Possibility to enable/disable the anonymous posting		
<b>Trigger:</b>	The user creates a form topic		
<b>Preconditions:</b>	<ol style="list-style-type: none"> <li>User must be a registered user of SPOD and TET platform</li> <li>User has a profile and have a personal login details (username and password)</li> <li>User needs an internet connection for accessibility of the platform</li> <li>The user has the authorisation to create new topics enabling the anonymity</li> </ol>		
<b>Postconditions:</b>	<ol style="list-style-type: none"> <li>The user successfully created a topic on SPOD;</li> <li>The topic allows the posting anonymous every time the users desire</li> </ol>		
<b>Normal Flow:</b>	<ol style="list-style-type: none"> <li>The user clicks on the “Create new Topic” button</li> <li>The system shows a form with details to create the topic</li> <li>The user fills out the form providing a topic subject, a post body, eventually he can attach a media file or a link to a dataset or a dataset visualisation</li> <li>The user can enable the “anonymous posting”, so that any other user can post on the topic anonymously when desired</li> <li>The user clicks on the “create” button to confirm the topic creation</li> </ol>		
<b>Alternative Flows:</b>			

<b>Exceptions:</b>	At steps 3-5, if user does not provide a topic subject or a body the system will display a field-required message.
<b>Includes:</b>	
<b>Frequency of Use:</b>	On demand
<b>Special Requirements:</b>	Usability that enhance platform to be simple and easy to use.
<b>Assumptions:</b>	User must be able to use platform in a preferred and comfortable language
<b>Notes and Issues:</b>	Which users can create topic enabling the anonymous posting?

#### 5.2.9 DIGEST INFORMATION IN A PRIVATE SPACE

<b>Use Case ID:</b>	UC28		
<b>Use Case Name:</b>	Digest information in a private space		
<b>Created By:</b>	UNISA	<b>Last Updated By:</b>	
<b>Date Created:</b>	18/09/2015	<b>Last Revision Date:</b>	
<b>User story ID/Needs of stakeholders:</b>	User Stories: <ul style="list-style-type: none"> <li>• S28.4: attaches the relevant maps, graphs and data summaries from his private space that he had saved before</li> <li>• Scenario: 20.Groningen.Principal Mraianne.1: Marianne saves a couple of items and elaborations in her private space</li> <li>• Scenario: 25.Groningen.Community Activist Sanne.3: at the end of her posts she attaches the relevant graphs and data summaries from her private space</li> <li>• Scenario: 32.Den Haag. Public Administrator Martin.1: Martin starts new thread where he puts the analysis stored in the private space along with his comments and observations.</li> </ul>		
<b>Actors:</b>	Ben (Consultant)		
<b>Description:</b>	Possibility to add media files, links to dataset, dataset visualisation in a private space to digest their content, comment and annotate them.		
<b>Trigger:</b>	The user accesses to his private space		
<b>Preconditions:</b>	1. User must be a registered user of SPOD and TET platform 2. User has a profile and have a personal login details (username and password) 3. User needs an internet connection for accessibility of the platform		
<b>Postconditions:</b>	1. The user uses tools to privately digest the information content		
<b>Normal Flow:</b>	1. The user clicks on the "private room" button 2. The system shows a list of content inserted in the user private space 3. The user adds a link to dataset, a dataset visualisation, a URL or a media file 4. The user can privately annotate the content or comment it in order to digest its information content		
<b>Alternative Flows:</b>			
<b>Exceptions:</b>			
<b>Includes:</b>			
<b>Frequency of Use:</b>	On demand		
<b>Special Requirements:</b>	Usability that enhance platform to be simple and easy to use.		
<b>Assumptions:</b>	User must be able to use platform in a preferred and comfortable language		
<b>Notes and Issues:</b>			

## 5.2.10 ENABLE REWARDING CONTENT ON SPOD

<b>Use Case ID:</b>	UC29		
<b>Use Case Name:</b>	Enable Rewarding Content on SPOD		
<b>Created By:</b>	UNISA	<b>Last Updated By:</b>	
<b>Date Created:</b>	23/09/2015	<b>Last Revision Date:</b>	
<b>User story ID/Needs of stakeholders:</b>	User Stories: <ul style="list-style-type: none"> <li>Scenario: 6.Dublin.Public Administrator Jane.2-Step 4: A PA advises Jane to activate the “Reward” option for the forum;</li> </ul> Stakeholders needs: <ul style="list-style-type: none"> <li>(Dublin) Reward system, gamification, acknowledgment;</li> <li>(Dublin) Group-specific reward system to maintain interest;</li> </ul>		
<b>Actors:</b>	User		
<b>Description:</b>	Possibility to activate the rewarding of content on SPOD, such as, discussions, posts, datasets, datasets visualisations, and so on.		
<b>Trigger:</b>			
<b>Preconditions:</b>	1. User must be a registered user of SPOD and TET platform 2. User has a profile and have a personal login details (username and password) 3. User needs an internet connection for accessibility of the platform 4. SPOD System Manager activates the rewarding 5. The topic where the user is contributing has been activated for rewarding		
<b>Postconditions:</b>	2. Rewarding is granted		
<b>Normal Flow:</b>	1. The user posts some content on the SPOD platform, be it a link to a dataset with a visualization, a URL, or other documents 2. The system shows the content appropriately to the other users that can express their appreciation and evaluation of what was posted 3. Based on the behaviour of other users (appreciations, etc.) and about the re-use of the content added by the user, the system can grant an award to the user, for public recognition (badges) and/or for role update (e.g., novice to expert) and/or rewards in terms of free access to some services of the Town.		
<b>Alternative Flows:</b>			
<b>Exceptions:</b>			
<b>Includes:</b>			
<b>Frequency of Use:</b>	On demand		
<b>Special Requirements:</b>	Usability that enhance platform to be simple and easy to use.		
<b>Assumptions:</b>	User must be able to use platform in a preferred and comfortable language		
<b>Notes and Issues:</b>			

## 6 TET/SPOD (COMMON) USE CASES

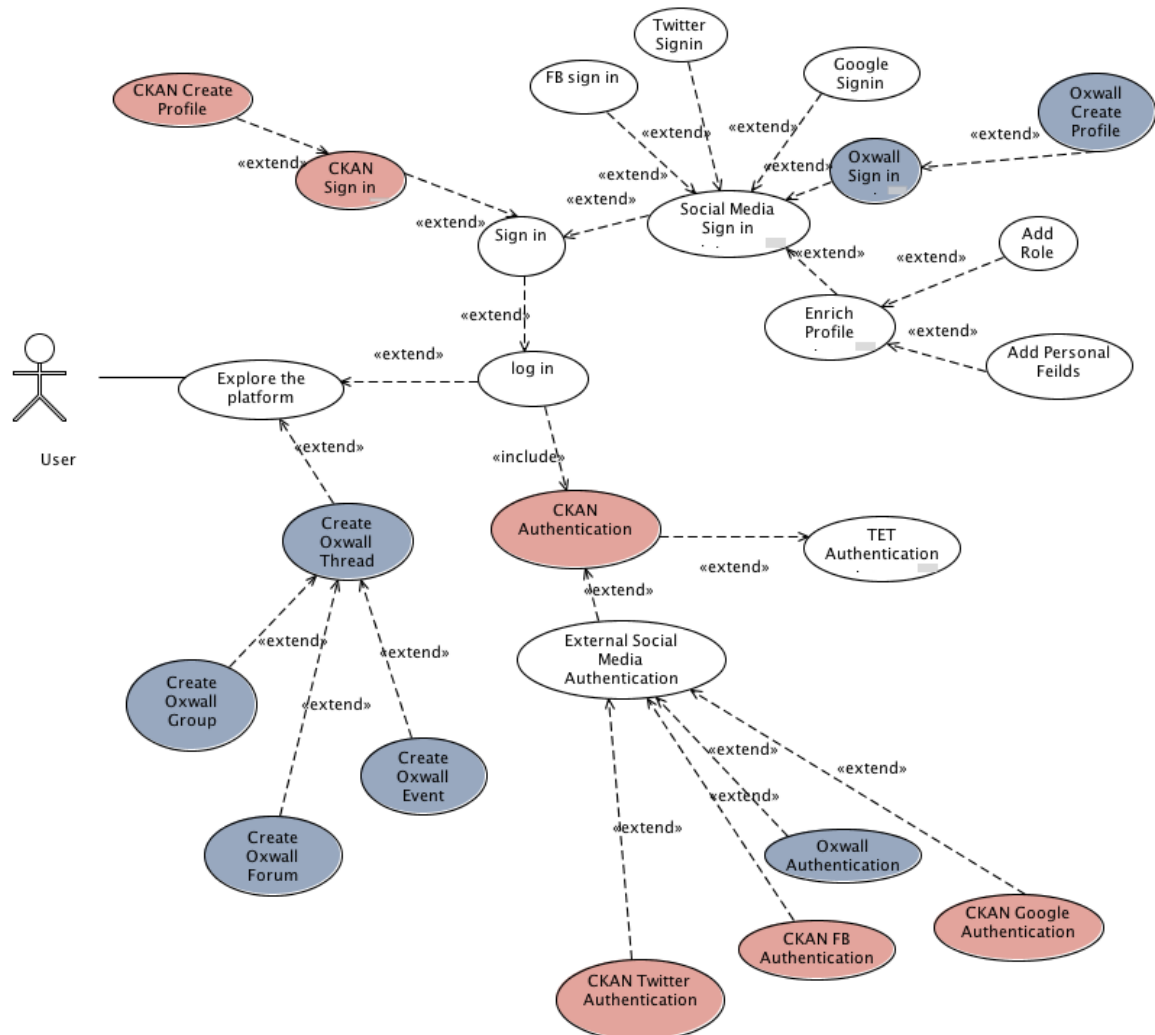


Figure 5: COMMON TET AND SPOD USE CASES

### 6.1.1 PROVIDE SUPPORTING CONTENT ON SPOD POST

<b>Use Case ID:</b>	UC5		
<b>Use Case Name:</b>	Share Link to Dataset/File via SPOD Post		
<b>Created By:</b>	E. Osagie	<b>Last Updated By:</b>	
<b>Date Created:</b>	21/08/2015	<b>Last Revision Date:</b>	
<b>User Story ID:</b>	s35.1		
<b>Actors:</b>	User [PA (Den Haag)]		

<b>Description:</b>	In this use case, the actors or User (PA) wants the other members of the SPOD discussion to view datasets and relevant legislative instruments relating to disability employment and available disability job market.
<b>Trigger:</b>	Martin is a resident of Den Haag who is employed even though he has a disability. Martin shares his story of how he secured a job. Other fellows with disabilities and employer alike reply to his post with interest to learn more. In this occasion, A public Administrator (PA) joins the SPOD discussion and provides links to relevant datasets and analysis on disabled employment legislation and disabled job market.
<b>Preconditions:</b>	<ol style="list-style-type: none"> <li>1. User (PA) must own account on TET/SPOD enabled CKAN platform</li> <li>2. User must be logged into SPOD</li> <li>3. User must have saved the link to the resources he/she want to share</li> </ol>
<b>Postconditions:</b>	<ol style="list-style-type: none"> <li>1. Once user selects the file(s) that contains the information or datasets he/she wants the recipients to view, and clicks on attach link button, system must attach all selected links to the post</li> <li>2. On receiving the links, users (link recipients) must be able to trace the links to the exact file intended for viewing by the sender</li> </ol>
<b>Normal Flow:</b>	<p>This use case is similar to the use cases on attaching file to support SPOD post.</p> <p>User is in the 'MESSAGEBOX' on SPOD composing a message then decides to support his message with a link to a dataset or other relevant materials:</p> <ol style="list-style-type: none"> <li>1. User clicks on INSERT a file button next to the message box</li> <li>2. System presents folder menu for user to select location of the file</li> <li>3. User selects SAVED ITEMS window on TET/SPOD-enabled CKAN platform</li> <li>4. System auto-switches window into the SAVED ITEMS window of the user account on platform</li> <li>5. User choosed the files by Ticking the CHECKBOX(es) next to the filename(es) he/she wants to use <i>[this time the actual file is not present in the user account but only the link to the source of the file]</i></li> <li>6. User clicks on ATTACH file button after the selection.</li> <li>7. System auto-switches back to the ongoing message box in SPOD (where user was) and attaches selected links</li> <li>8. User completes message writing and clicks on POST/SEND button to send the message to network members.</li> </ol>
<b>Alternative Flows:</b>	<p>If in a similar case user is browsing the data catalogue on platform and comes across dataset that could be used to support discussions on SPOD. User can executes the following alternative use case:</p> <p>User views a dataset and would like others to view it, but perhaps due to large size, decides to post the link only. In this case, user doesn't need to save the link or dataset first before sharing the link.</p> <ol style="list-style-type: none"> <li>1. User checks on the filename he/she wants to share</li> <li>2. System selects the files</li> <li>3. User clicks on the "SHARE LINK" button</li> <li>4. System auto-switches to a new MESSAGEBOX in SPOD and attaches the selected links to a file to be shared</li> <li>5. User types his message inside the message box.</li> <li>6. User clicks on POST/SEND button</li> <li>7. System sends the message to network members and clears the message box</li> </ol>
<b>Exceptions:</b>	None
<b>Includes:</b>	<p>The following use cases are relevant to this particular use case. However, they are not represented in this documentation because <i>the functionalities are already existing on Oxwall (<a href="http://www.oxwall.org/">http://www.oxwall.org/</a>) which is to host SPOD:</i></p> <ol style="list-style-type: none"> <li>1. Post on Oxwall</li> <li>2. Comment on Oxwall</li> <li>3. Chat on Oxwall</li> </ol>
<b>Frequency of Use:</b>	On demand
<b>Special Requirements:</b>	<ol style="list-style-type: none"> <li>1. Supportability for the file attachment functionalities</li> <li>2. Usability of the system for the purpose</li> <li>3. Performance (speed)</li> <li>4. Support for storage space for files</li> <li>5. Seamless switching by the system between TET and SPOD interfaces</li> </ol>
<b>Assumptions:</b>	System switches between SPOD and TET seamlessly unnoticed by user
<b>Notes and Issues:</b>	To be determined:

	1. Possibility to send links without having to save it first on user's account
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#### 6.1.2 USING EXTERNAL SOCIAL MEDIA FOR LOGIN AUTHENTICATION: E.G. FACEBOOK

<b>Use Case ID:</b>	UC8		
<b>Use Case Name:</b>	External Social Media Authentication		
<b>Created By:</b>	E. Osagie	<b>Last Updated By:</b>	
<b>Date Created:</b>	23/08/2015	<b>Last Revision Date:</b>	
<b>User Story ID:</b>	s3.0		
<b>Actors:</b>	User (Entrepreneur Annie (Dublin))		
<b>Description:</b>	Instead of typing in another set of personal data to register (Login) into the TET/SPOD-enabled CKAN Platform, user simply clicks on the option to login with his or her existing profile on another platform. In this case user chooses to login with her Facebook profile.		
<b>Trigger:</b>	User (Entrepreneur Annie) is interested in starting a locally based café/food business and would like to connect with public administrators (PAs) and potential customers to find out if there is a demand for the products/services of this new business; what kind of premises or permissions she might need, what supports are available and to connect with other people who might partner/work with her in starting this business. She would like to use technology to build local social networks to connect with her business network and build a local customer base. Annie wants to explore Open Data for business purposes, to leverage Open Data to create new value and to connect, collaborate and co-create with other business people. For these reasons, Annie decides to login with her Facebook account so that her existing contacts on Facebook can see what she's up to on a new TET/SPOD enabled Open data platform and she can introduce them to the platform for collaborative purposes.		
<b>Preconditions:</b>	<ol style="list-style-type: none"> <li>1. User must be having an existing login details with Facebook (or other existing social media platforms)</li> <li>2. User must remember her login name/email and password in the social media he/she wants to use in SPOD login</li> <li>3. System must have authentication synchronization functionality interoperable with the use's choice of social media platform.</li> </ol>		
<b>Postconditions:</b>	<ol style="list-style-type: none"> <li>1. System must be able to connect to the login interface of the external social media platform of the user</li> <li>2. System must be able to synchronize with the personal login details of the user existing in the external social media platform</li> <li>3. System must be able to import the data into the corresponding fields on TET/SPOD enabled CKAN platform from the external social media platform of the user.</li> </ol>		
<b>Normal Flow:</b>	<ol style="list-style-type: none"> <li>1. User clicks on the REGISTER button on TET/SPOD-enabled CKAN platform</li> <li>2. System opens the login window with the login fields [Username (or email)   Password] and an option button [Login with: Facebook, Twitter, etc.]</li> <li>3. User clicks on FACEBOOK</li> <li>4. System connects with the login fields of Facebook</li> <li>5. User enters her EXISTING Facebook details and clicks on LOGIN button</li> <li>6. System logs the user into TET/SPOD-enabled CKAN platform and displays a welcome notification</li> <li>7. User clicks OK</li> </ol>		
<b>Alternative Flows:</b>	None		
<b>Exceptions:</b>	<p>At step 5 of the normal flow: User enter incorrect login details:</p> <ol style="list-style-type: none"> <li>1. At step 6: system displays error message: [Incorrect login and password]</li> <li>2. System returns to step 5 of normal flow and clears previous entries</li> <li>3. User types in the correct login details</li> <li>4. Use case continues from step 6 to step 7 of normal flow.</li> </ol>		
<b>Includes:</b>	None		
<b>Frequency of Use:</b>	On demand		

<b>Special Requirements:</b>	<ol style="list-style-type: none"> <li>1. Usability</li> <li>2. Seamless inter-connection between the TET/SPOD-enabled CKAN platform and external social media login interface</li> <li>3. Seamless switching back to platform after user have entered her personal details and clicks on "LOGIN" button</li> <li>4. Adherence to Data Privacy and security guideline</li> </ol>
<b>Assumptions:</b>	It is assumed that the system will interoperate the login authentication requirement with the external social media platform
<b>Notes and Issues:</b>	<p>To be determine:</p> <ol style="list-style-type: none"> <li>1. The group of social media platforms to be alternative external social media login – e.g. Facebook, Twitter, Gmail, Outlook, etc.</li> </ol>

### 6.1.3 PERSONALIZE SEARCH

<b>Use Case ID:</b>	UC17		
<b>Use Case Name:</b>	Personalize Search		
<b>Created By:</b>	Sonya Abbas	<b>Last Updated By:</b>	
<b>Date Created:</b>		<b>Last Revision Date:</b>	
<b>User Story ID:</b>	S28.2		
<b>Actors:</b>	User [Ben (Consultant)]		
<b>Description:</b>	This use case describes how the user uses TET to do personalized search.		
<b>Trigger:</b>	User chooses "Personalized Search"		
<b>Preconditions:</b>	User Provides System with user situation (either while creating his profile – login case – or while searching – no login case)		
<b>Postconditions:</b>	User receives list of datasets contains user situation related information		
<b>Normal Flow:</b>	<ol style="list-style-type: none"> <li>1. User chooses "Personalized Search"</li> <li>2. User enters query</li> <li>3. System retrieve user profile</li> <li>4. System applies profile based search</li> <li>5. System gets search results</li> <li>6. System displays results to user</li> </ol>		
<b>Alternative Flows:</b>	<p>2a. In step 2 of the normal flow, if the user didn't log in</p> <ol style="list-style-type: none"> <li>1. System asks user to choose his user situation</li> <li>2. User chooses from list of roles</li> <li>3. System save it as user situation</li> </ol> <p>Use Case resumes on step 3 of normal flow</p>		
<b>Exceptions:</b>	<p>4a. In step 4 of the normal flow, no corresponding results</p> <ol style="list-style-type: none"> <li>1. System will inform user</li> <li>2. System will ask user to change his search query</li> <li>3. User tries again</li> </ol> <p>Use Case resumes on step 3</p>		
<b>Includes:</b>	CKAN search		
<b>Frequency of Use:</b>	100 per hour		
<b>Special Requirements:</b>	Performance – speed		
<b>Assumptions:</b>	CKAN search feature is enabled		
<b>Notes and Issues:</b>			

#### 6.1.4 REQUEST RECOMMENDATIONS FOR DATA SETS

<b>Use Case ID:</b>	UC19		
<b>Use Case Name:</b>	Request Recommendations for Data Sets		
<b>Created By:</b>	Sonya Abbas	<b>Last Updated By:</b>	
<b>Date Created:</b>		<b>Last Revision Date:</b>	
<b>User Story ID:</b>	S26.5		
<b>Actors:</b>	User [Ben (Consultant)]		
<b>Description:</b>	This use case describes how the user request the system for datasets recommendations		
<b>Trigger:</b>	User chooses "Request Notification"		
<b>Preconditions:</b>	1. User has logged in		
<b>Postconditions:</b>	User receives list of recommended datasets based on his profile		
<b>Normal Flow:</b>	1. User chooses "Request Recommendations" 2. The system automatically generates list of recommend datasets and displays them to the user.		
<b>Alternative Flows:</b>	NA		
<b>Exceptions:</b>			
<b>Includes:</b>			
<b>Frequency of Use:</b>			
<b>Special Requirements:</b>			
<b>Assumptions:</b>	User has a profile		
<b>Notes and Issues:</b>			

#### 6.1.5 LOGIN

<b>Use Case ID:</b>	UC23		
<b>Use Case Name:</b>	Login		
<b>Created By:</b>	Samuel Adebayo	<b>Last Updated By:</b>	
<b>Date Created:</b>	20/08/2015	<b>Last Revision Date:</b>	
<b>User story ID:</b>	S38.1		
<b>Actors:</b>	User [Entrepreneur Anne]		
<b>Description:</b>	User logs in to TET/SPOD enabled-CKAN platform via TET or SPOD using his personal data.		
<b>Trigger:</b>	User intends to use the available data resources on the platform		
<b>Preconditions:</b>	1. User is a registered member of the platform 2. User remembers his valid login details. 3. System is connected to the internet and platform servers		
<b>Postconditions:</b>	1. User login to access the resources 2. User explores the resources		
<b>Normal Flow:</b>	1. User browses the platform 2. User logs in to access the resource		

	<ol style="list-style-type: none"> <li>System validates login details</li> <li>System displays the user account page on TET/SPOD-enabled CKAN platform</li> <li>User locates the useful resources</li> <li>User explores the resources</li> <li>User signs out when done</li> </ol>
<b>Alternative Flows:</b>	System will prompt user to login <ol style="list-style-type: none"> <li>User logs in</li> <li>User continues to explore resources on the platform</li> <li>If user declines to login</li> <li>Access to resources is denied</li> </ol>
<b>Exceptions:</b>	If user enters an invalid login details: <ol style="list-style-type: none"> <li>User enters invalid login details</li> <li>access to platform full features is disapproved</li> <li>message to user to re-enter login details</li> <li>user enter correct login details</li> <li>use case resume on step 4 of normal flow</li> </ol>
<b>Includes:</b>	CKAN Authentication
<b>Frequency of Use:</b>	
<b>Special Requirements:</b>	Security and usability is required to support authentication mechanism for TET and SPOD
<b>Assumptions:</b>	User should be able to browse the platform in a preferred language
<b>Notes and Issues:</b>	

#### 6.1.6 ENRICH PROFILE

<b>Use Case ID:</b>	UC24		
<b>Use Case Name:</b>	Enrich profile		
<b>Created By:</b>	Samuel Adebayo	<b>Last Updated By:</b>	
<b>Date Created:</b>	20/8/2015	<b>Last Revision Date:</b>	
<b>User story ID:</b>	S28.1		
<b>Actors:</b>	Ben (Consultant)		
<b>Description:</b>	User enriches a profile on the platform by adding some personal information, this can be done on the platform in the following ways: Add role such as occupation or position held Add personalized field such as age, sex, religion etc.		
<b>Trigger:</b>	User need to enrich profile for personalization purpose and to prompt system to suggested information suitable for user		
<b>Preconditions:</b>	<ol style="list-style-type: none"> <li>User must be a registered user of the platform</li> <li>User needs a profile</li> <li>User must possess other features to add for personalization purpose</li> </ol>		
<b>Postconditions:</b>	User updated its profile with personalized features		
<b>Normal Flow:</b>	<ol style="list-style-type: none"> <li>User browses the SPOD platform</li> <li>User logins with his personal details</li> <li>Platform validates if user is registered user</li> <li>User creates profile</li> <li>User adds personalized features to the profile such as role and other personal information.</li> </ol>		
<b>Alternative Flows:</b>	User isn't registered yet on platform but attempts to visit Account settings page <ol style="list-style-type: none"> <li>User clicks on ACCOUNT button</li> <li>System prompts user to create register account before creating a profile</li> <li>User accepts, registered and login</li> </ol>		

	4. User creates and personalized profile with personal features
<b>Exceptions:</b>	
<b>Includes:</b>	
<b>Frequency of Use:</b>	On demand
<b>Special Requirements:</b>	Personalization is required which provides users with tailored platform based on their preferences in terms of appearance, usefulness and capacity
<b>Assumptions:</b>	User must be able to use platform in a preferred and comfortable way
<b>Notes and Issues:</b>	

## 7 REQUIREMENTS ANALYSIS

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In this section we present the requirement specification, which is an extension to the detailed use-case analysis presented in Section 4. In particular, we link every requirement with specific ROUTE-TO-PA objectives and systems qualities of the platform for more explicit and more complete background information for ROUTE-TO-PA platform development. The use case analysis together with the requirements is intended to serve as a base blueprint for the developers in the early stage of the ROUTE-TO-PA platform delivery. However, in line with the Agile development approach applied, these specifications should be considered a tentative picture of the final system and will be constantly expanded and updated throughout the life-span of the project.

*Table 4: Requirement Specification*

<b><i>Use case ID</i></b>	<b><i>User story ID</i></b>	<b><i>Requirement</i></b>	<b><i>ROUTE-TO-PA Objectives</i></b>	<b><i>System qualities</i></b>
UC1	S29.1	System provides user with visualisation tool e.g. provenance records & metadata etc. to enable user view the dataset quality completeness on a graph to decide on fit for purpose. System provides user with storage space & functionality to enable user save/add items of interest to his/her account on platform	Visualisation of dataset quality in graph, save items to account	Usability (simplicity, performance) Accessibility (Portability, publicity) Auditability (accountability, validity); Informativeness (comparability)
UC2	S29.3	System provides user with visualisation tool e.g. provenance records & metadata etc. to enable user view the dataset quality completeness on a graph to decide on fit for purpose	Visualisation of dataset quality in graph, save items to account	Usability (simplicity, performance) Accessibility (Portability, publicity) Auditability (accountability, validity); Informativeness (comparability)
UC3	S29.2	System provides users with tools to check & to rate dataset quality based on Open Data standardised criteria to enable data users point others to quality datasets, reward quality data providers and encourage others to follow	Ranking tools, Rewards on SPOD tools	Usability (simplicity, performance, user friendliness, uniformity) Auditability (accountability, validity); Informativeness (Integrity, comparability)

UC4	S2.3	System provides users with tools to enable user to export files from TET interface or other locations (cloud, local HD, mobile devices) to SPOD post in seamless manner. System has capability to handle various file format simplicity and performance speed. System support multiple interface login - desktop, laptop and mobile devices	File export and import, file sharing capabilities to support SPOD post	Usability (operability simplicity, performance, support for file formats) Understandability (dependability)
UC5	S35.1	System provides user with SPOD communication tools & file management tools between TET & SPOD to enable user compose a message, attach a file from TET or other sources & send to network; and to enable other users (post receivers) to open post/file, read, save & reply to post; System provides functionality to send a hyperlink to a dataset on SPOD post to enable user who receives the link view the details of the dataset on TET	Interaction on Open Data vis SPOD, Attach files to SPOD post to support discussions	Usability (Performance, adaptability, user-friendliness); Informativeness (integrity, privacy, security); Accessibility (availability, portability, publicity)
UC6	S7.1	System provides tools for screenshot and document annotation to enable user utilise the tools to highlight points of interest before use on SPOD post. System provides user with SPOD communication tools & file management tools between TET & SPOD to enable user compose a message, attach a file from TET or other sources & send to network; and to enable other users (post receivers) to open post/file, read, save & reply to post	Annotate screenshot and use to support SPOD discussions	Usability (support for graphical tools & file formats, performance, simplicity, learnability); Understandability (composability, dependability); Informativeness (clarity)
UC7	S31.1	System provides tools, tags and widgets so that users use it to vote on an issue under discussion on SPOD. Network members receive posts containing tags and widgets to vote on an issue.	Vote on SPOD on issues on SPOD discussion	Usability (customisability, adaptability, simplicity); Understandability (conciseness, decomposability); Accessibility (portability, availability, publicity)
UC8	S3.0	System present tools to link TET/SPOD-enabled CKAN platform authentication interface with authentication interfaces of	Allow users to sing in with their existing social media profile	Usability (interoperability, adaptability); Informativeness (Integrity); Auditability (Verifiability); Accessibility (availability)

		existing social media platform e.g. Facebook, twitter, LinkedIn, etc.		
UC9	S2.6	System provides tools, tags and widgets to enable users customise a post so that post receivers can rate a comment on SPOD and vote on an issue under discussion on SPOD.	User customizes posts on SPOD	Usability (customisability, adaptability, simplicity, performance)
UC10	s1.4	Simple analysis, analytics and visualisation to analyse datasets & visualise results in common graphs; System provides file management functionalities to enable users filter & combine datasets or SPOD contents; download, upload, integrate, export, import, drag-n-drop files based on OD file formats & API supply guidelines; System specifies data size user can upload at a time to prevent system crashes and maintain system performance and availability at all times	System should compute descriptive analysis, perform basic mathematical and statistical operations on data, store information to describe analysis processes, create reports aimed at the public (e.g., per location/ per role). System should enable data cleaning and data filtering	Usability (Supportability for analysis & visualisation tools, operability, intuitiveness, performance); Accessibility (Availability); Auditability (validity); Understandability (decomposability, composability); Informativeness (accuracy, correctness, comparability, clarity)
UC11	s32.2	System provides search & filter options to enable user personalise search based on relevance to their status while searching dataset without login. System provides database "Query" tools to enable user query OD portal in order to download and use datasets	System should provide query builder interface, transform user queries to Sparql & compile user queries. System should execute Sparql queries and display Sparql queries results to user	Accessibility (Portability, availability, publicity); Usability (Simplicity, User-friendliness, personalisation); Understandability (Conciseness); Informativeness (Integrity, privacy, correctness)
UC12 / UC14	s8.1	Platform provides user with plenty of APIs to enable user carry out data exchanging & comparison between 2 or more OD platforms or external systems. System provides data linking & integration TET tools on platform to enable user link & integrate datasets within and across OD platforms using linked data principles. System provides file management functionalities to enable users filter & combine datasets or SPOD contents; download, upload, integrate, export, import, drag-n-drop files based on OD file formats & API supply guidelines	System should achieve the following: apply semantic web technologies for datasets integration & linking, provide interface for linking to allow user choices for entities & properties, store links, perform ETL operation for integration ( where other data formats are included), update data with linked data version, reuse existing vocabularies, send alerts user subscribers when new dataset are added to platform repository.	Usability (inter-operability, supportability - file formats, performance, adaptability, uniformity, simplicity); Accessibility (availability); Auditability (accountability, controllability, traceability); Understandability (extensibility, dependability); Informativeness (completeness, integrity)

UC15 / UC16	S13.9	Platform provides user with plenty of APIs to enable user carry out data exchanging & comparison between 2 or more OD platforms or external systems. System provides data linking & integration TET tools on platform to enable user link & integrate datasets within and across OD platforms using linked data principles. System provides file management functionalities to enable users filter & combine datasets or SPOD contents; download, upload, integrate, export, import, drag-n-drop files based on OD file formats & API supply guidelines	System should provide user with ability to choose datasets for comparison System should compute datasets comparison analysis (centre/spread/shape) System should visualize compared datasets (as dotplots/ parallel boxplots/ double bar charts)	Usability (inter-operability, supportability - file formats, performance, adaptability, uniformity, simplicity); Accessibility (availability); Auditability (accountability, controllability, traceability); Understandability (extensibility, dependability); Informativeness (completeness, integrity)
UC17	s28.2	Platform provides simple tools for various functionalities on system interface to enable user learn system tools (TET & SPOD) and encourage platform adoption & usability	System should enable data filtering be able to filter datasets into specific subset (year, location, quality, etc.)	Accessibility (Portability, availability); Usability (Simplicity, User-friendliness, navigability); Informativeness (Integrity, clarity); Understandability (Dependability)
UC18	s3.1	System sends notifications about new or update of datasets to user to alert the user to the freshness quality of dataset on platform	System should filter search results based on user profile/situation	Accessibility (Portability); Usability (intuitiveness, inter-operability)
UC19	S26.5	System provides options (role, location, age, email, sex, marital status, language, disability status, social status) to user to enable user personalise account & receive content suggestions based on account data. System recommends contents based on inferred information from user's profile (personalized labels-extra social profile integration) so that user can select content of interest to him	System should send recommendations for similar/updated or related datasets in CKAN to subscribed users, it should send recommendations for interesting data (high quality / published by public sectors / high debate on it)	Usability (personalisation, adaptability, simplicity); Informativeness (integrity, data privacy); Accessibility (portability)
UC20 / UC21	s2.2	System provides simple analysis, analytics and visualisation tools to enable users (including non-tech savvy) to analyse datasets & visualise results in common graphs to enhance comprehension of data meaning	System should browse data and selects appropriate visualization, select appropriate visualization infographic format be able to visualize data	Usability (support for analysis & visualisation tools, operability, intuitiveness, performance); Understandability (decomposability, composability); Informativeness (accuracy, correctness, comparability, clarity)

UC22	S28.3	System provides user with visualisation tool e.g. provenance records, metadata etc. to enable user view the dataset quality completeness on a graph to decide on fit for purpose. System provides user with storage space & functionality to enable user save/add items of interest to his/her account on platform	Enables users to create a post for open data discussion	Accessibility (availability)
UC23	S28.1	Platform supports single authentication mechanism for TET and SPOD to prevent user from the trouble of multiple login but enhance easy single experience for TET & SPOD; Platform ensures privacy & security of user data it stores with user permission to enable user understand what type of his data is stored and how it is used	Provides access via login details to an enabled Oxwell and CKAN platform	Auditability (validity, verifiability)
UC23	S38.1	Platform supports single authentication mechanism for TET and SPOD to prevent user from the trouble of multiple login but enhance easy single experience for TET & SPOD; Platform allows user to enter personal data on profile (e.g. role, location) but ensures privacy & security of user data & stores data with user permission to enable user understand what type of his data is stored and how it is used	System prompts user to add more data to profile on the platform by adding some personal information	Auditability (validity, verifiability, controllability)
UC24	S38.1	System provides the interoperability tools with the social media platform (e.g. Facebook, Twitter, Google, etc.) and synchronises authentication capability with the social media platform. System maintains capabilities to adhere to privacy and security policies across the two platforms.	Provide adaptability to other social media platforms	Usability (adaptability, simplicity, user-friendliness); Auditability (validity, verifiability)

## 8 RESPONSIBLE RESEARCH AND INNOVATION CRITERIA

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Responsible Research and Innovation is a cross-cutting issue of the entire EU framework programme for Research and Innovation. The concept of what is “responsibility” may be elusive as it encloses the aspect of “being responsible” but also “being seen to be responsible”. The overall objective of the RRI is to align more consistently the research agenda with societal needs and concerns, making explicit a mutually reinforcing relationship.

A common definition of what RRI comes from von Schomberg (2011):

*“Responsible Research and Innovation is a transparent, interactive process by which societal actors and innovators become mutually responsive to each other with a view to the (ethical) acceptability, sustainability and societal desirability of the innovation process and its marketable products (in order to allow a proper embedding of scientific and technological advances in our society).”*

In 2012, the European Commission (European Commission 2012b) defined RRI as follows.

*Responsible Research and Innovation means that societal actors work together during the whole research and innovation process in order to better align both the process and its outcomes, with the values, needs and expectations of European society. RRI is an ambitious challenge for the creation of a Research and Innovation policy driven by the needs of society and engaging all societal actors via inclusive participatory approaches.*

In 2014, a group of experts was appointed by European Commission “to identify and propose indicators and other effective means to monitor and assess the impacts of Responsible Research and Innovation (RRI) initiatives, and evaluate their performance in relation to general and specific RRI objectives”. During their work, influenced also by the Rome Declaration on RRI in Europe of Nov. 21st 2014, the experts suggested to a list of 8 criteria to be monitored:

1. Public engagement.
2. Gender equality.
3. Science education.
4. Open access.
5. Ethics.
6. Governance.
7. Sustainability.
8. Social justice/inclusion.

For a full definition of the criteria, we refer to R.Strand, J. Spaapen, M.W. Bauer, E. Hogan, G. Revuelta, S. Stagl, L. Paula, A. Guimaraes Pereira (2015).

In ROUTE-TO-PA, starting October 2015, we provide within each deliverable, an explicit indication of how the RRI criteria are addressed. With periodic reports, the collection of all the material will facilitate the monitoring of RRI indicators at a global level (per-project).

1. Public engagement
  - a. In order to perform the requirement elicitation activity, we involved public administrators, active citizens, researchers and data journalists, social organisations and entrepreneurs through the organisation of formal workshops. Workshops have been organised in each of the following five pilots: Dublin (Ireland) involving 18 experts, The Hague (The Netherlands) involving 17 participants, Prato (Italy), Issy-les-Moulineaux (France) involving 8 experts, Groningen (The Netherlands) involving 16 experts.
2. Gender equality
  - a. Through workshops for requirements elicitation XX participants have been involved; YY of them were female.
    - i. During the workshop in Groningen six female and ten male participants have been involved
    - ii. The Hague (in two workshops) 21 male and 3 female
    - iii. Prato
    - iv. Dublin
    - v. Issy
3. Science education
  - a. N.A.
4. Open access.
  - a. All the scenarios and user stories which are referred by this deliverable, and the deliverable itself, are offered openly through the project website, at [www.routetopa.eu/public-deliverables/](http://www.routetopa.eu/public-deliverables/). This deliverable will be also available in its final format.
5. Ethics
  - a. According to D1.5 Ethical Policy, in order to conduct the user workshops, each research partner submitted a proposal for ethical clearance to the relevant authorities in their context (University, Research Center/Company). The main goal of this ethical clearance is to guarantee the right, safety and risks-free for participants in the scientific research activities. Each partner got the ethical approval all of them attached to the Deliverable D1.5 Ethical Policy.
  - b. According to the process submitted to ethical clearance, workshops to gather requirements have been organised giving material (consent forms, questionnaires etc.) during and right after the workshops. So, workshop organisers obtained informed consent to participants.
  - c. In addition, ethical issues have been considered within the collected requirements. In particular, the UC23 Requirement states that Platform ensures privacy & security of user data it stores with user permission to enable user understand what type of his data is stored and how it is used
6. Governance
  - a. N.A.
7. Sustainability
  - a. N.A.
8. Social Justice / Inclusion
  - a. Table 1 s6.2 SPOD supports accessibility features so that disabled users can personalise their interface to take advantage of the features
  - b. Use cases consider as special requirements the usability and the accessibility of the deployed systems (TET and SPOD), and in particular for some use case explicit alternative flow designed for

users with visual deficiencies. For instance, UC4(B) which aims to share a dataset with a visualisation, these open dataset graphical visualisations are accessible for users with visual deficiencies.

- c. Inter-generational dimension is considered, as also pointed out during the workshops (e.g., find ways to reach out to socially isolated older citizens)

## 9 CONCLUSIONS

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For the purposes of visualising development transitioning from and data traceability through deliverables, we thought it wise to run through a synopsis of the important deliverables such as D2.2, D2.3 to D2.4 of ROUTE-TO-PA project. ROUTE-TO-PA deliverable D2.2 (Analytical Framework and Initial Scenarios on Open Data and Transparency) focused on the analytical framework that underpins ROUTE-TO-PA platform based on democratic and open data enhanced transparency principles. In addition, we developed the initial stories for each of the pre-conceived user stories that were to be administered in the workshops in various participating countries (Dublin, Prato, Den Haag, Groningen and Issy Les Molineux). Further, we assembled related stories under various scenarios to demonstrate the desired functionalities in accordance with the aims and objectives of the ROUTE-TO-PA project. Finally, we tied the scenarios to:

- the democratic contexts they exemplify (e.g. Participatory, Monitorial or Deliberative Democracy),
- the role of the actors,
- information exchange,
- use of open data, transparency requirements and what the ROUTE-TO-PA project offers in each case.

In D2.3 (User Stories on Open Data and Transparency), we presented the stories of the users as we gathered them from the workshops where we had the opportunity to test certain scenarios and user needs and desires. We gathered and reported on the various needs (e.g. information needs, social, collaboration and interaction needs as well as understandability, usability and decision-making needs) of the different stakeholders (e.g. citizens, public administrators, entrepreneurs and civil activists). Finally, carefully combined all relevant sets data – that is:

- Data from all field works (workshops enhanced with rich data both from stakeholder interviews and facts from literature review
- The pre-designed user stories held under various scenarios in deliverable D2.2.

The rich mix of data (user stories, needs and desires) was properly analysed and streamlined into more conceivable system actions demonstrating TET, SPOD and TET/SPOD user actions in distinguishable fashions as envisaged in the final functional ROUTE-TO-PA platform. These more precise user stories were summarised and systematically tagged to reflect their reference scenarios (from D2.2) as presented in the User Stories Analysis table in D2.3, page 121.

In this particular deliverable, deliverable D2.4 (Requirement Specification and Use Case Models), we further greatly enhanced and strengthened the user stories in a manner suitable for the development of use case

models. This means that we separated the various components of the user stories (Table 2) into: the actor, the activity performed by the actor, the outcome of the activity as well as the democratic context. In addition to the above, we filtered out the keyword(s)/phrase of each story to be used, in many cases, as the use case title or name. Subsequently, we split the use cases into three groups – the TET Uses Cases, the SPOD Use Cases and TET/SPOD Uses Cases and developed the use case models (Diagrams) – one for each group using the Eclipse modelling tool. In developing the use case table, we ensure adherence to traceability principles by introducing the reference scenario numbers adopted in previous documentation.

Finally, in the requirement analysis section we provided the system requirements as functions to match user needs and desires according to the specific objectives of the ROUTE-TO-PA project. The matching systems qualities for each use case were selected from the Transparency Construct (Cappelli, 2009) which was adopted as figure 5 on page 15 of deliverable D2.1. The qualities are the specific systems attributes that the system developers should work towards during code development.

## REFERENCES

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