

Critical Turning Points database: Population and Deployment

Deliverable 5.3

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This Deliverable 5.3 describes the data population and envisioned deployments of a database on Critical Turning Points in Transformative Social Innovation processes.

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1 Introduction

This third deliverable of Work package 5 reports on task 5.3 "Conduct survey and populate the database". It describes the database structure and dataset developed through the empirical research on Critical Turning Points that has been conducted between August 2015 and June 2016. As such it consolidates the most substantial phase of WP5 activities in terms of person months: All 12 institutes have been involved in the empirical work on the 80 initiatives covered by the database. WP5 leads ULB and WP5 partners AAU and UDC have been guiding this research process, each following the empirical research as undertaken by 3 groups of 4 TRANSIT institutes.

An important caveat to make is that the milestone of 'database populated' will only be achieved by October 2016. The reasons for this deviation from Description of Work and the planning that it forms part of will of course be explained in this document. The crucial point is that the database will not be built up from survey data, but from more in-depth, qualitative data on processes of transformative social innovation. The choices for this qualitative, process-oriented approach to meta-analysis, as described extensively in the deliverables D5.1, D5.2 and the guidelines for WP5 empirical research, imply a relatively more intrincate process of data management. In between the phases of data gathering and deployment of the data for analysis, there is a phase of *preparing the data* for analysis. This data preparation involves a harmonization of data entries, insertion of key words for search optimization, and a further elaboration of the database architecture on the basis of first entries of Critical Turning Point files.

The deliverable provides an overview of the Critial Turning Points database that already substantiates the scope for larger-N meta-analysis. Notwithstanding the indicated delay in database population (with data), the presented overview of current database contents shows how the database is bringing together harmonized data on 20 social innovation networks, and 80 local manifestations of those spread over a broad variety of countries. As the timelines for these local manifestations each contain 6 detailed accounts of Critical Turning Points in Transformative Social Innovation, the database will eventually be populated with 480 accounts of CTPs – each structured through six key aspects and shaped along a common lay-out.

Finally, this deliverable will report on the progress made regarding the deployment of the database. Apart from the key deployment to prepare for, the meta-analysis by TRANSIT researchers, there are complementary elements of deployments that need to be supported in order to realize the multiple learning potentials of an online database. For the realization of these learning potentials, we have taken up the database development through a continuous design process that started in June 2015 and will be formally rounded off by September 2016. Later in the project, the database will be confronted extensively with "users", itself a category of actors that undergoes our ongoing critical identification. Together with the contracted database developer, the database is shaped through a series of stepwise additions of elements – the screenshots in this document show the many elements that are already in place. Informed by discussions on learning potentials and functionalities with TRANSIT researchers and social innovation practitioners, the structure can be further refined for an optimal functionality for various groups of users.

The deliverable is structured as follows. First we outline the WP5 planning. This involves explanation of the aforementioned deviation from DOW timeline, and the three-step approach taken to the implementation of the key WP5 objective, namely the meta-analysis. The planning indicates the envisioned steps towards the D5.4 final deliverable, as well as the different kinds of activities undertaken to ensure alignment with other workpackage activities **(Chapter 2)**. Next, we describe the contents of the CTP database. This is the most

substantial chapter. The detailed overview of database contents summarizes the substantial research efforts waged by researchers from all TRANSIT institutes. The description also helps to envision the deployments and analyses that can be undertaken **(Chapter 3)**. Finally, we briefly indicate how we seek to shape database deployment, and the learning processes on Transformative Social Innovation that it is to support. As described in a working paper (included in annex), the database project has been undertaken with a strong commitment to 'democratization of the survey' and the development of transformative learning beyond the confines of the TRANSIT itself. The development of database deployments has occurred along with the development of the database contents **(Chapter 4)**.

1 Planning and development process

1.1 Deviation from timeline (as in Description of Work)

An important caveat to make is that the milestone of 'database populated' is only partly achieved, as long as this objective is interpreted as a point in time beyond which the data/content of the database would not be touched nor refined nor reconditioned anymore. As will be substantiated in the next chapter, the CTP database currently contains basic data on 20 networks, 80 social innovation initiatives and the 480 Critical Turning Points that shape their timelines. The database also contains first versions of the detailed accounts of CTPs that will be forming the key ingredient for meta-analysis.

The reason for this deviation from Description of Work is that the database will not be built up from discrete, quantifiable and uniform survey data that can be inserted nearautomatically. The Critical Turning Points database gathers in-depth, qualitative data on processes of transformative social innovation, which entails a much more intrincate process of data treatment, pre-configuration, conditioning and management than a classical survey set-up would require. The next subsection elaborates the three steps needed to go from the guidelines for empirical research (annex to D5.2) to the generation of meta-analysis findings (D5.4): 1) data gathering, 2) preparation of data for analysis and 3) meta-analysis.

The choices for this qualitative, process-oriented approach have been described extensively in the deliverables D5.1, D5.2 and the guidelines for WP5 empirical research. The key consideration has been that the theory development in WP3 has converged onto a co-production framework of TSI (Haxeltine et al. 2015). This theoretical framework and associated propositions (Haxeltine et al. forthcoming) are conceptualizing TSI as a process of inter-related changes and evolving actors, institutions and contexts. As such they can be elaborated and tested only through *process analyses*, which in turn obviously requires large quantities of detailed *process data*.

2.2 Planning. Current, past and future – a 3 steps approach

The construction of a Critical Turning Points database forms part of a more encompassing research process. Its planning follows from two important timelines, namely 1) the overall planning of WP5 and 2) the TRANSIT planning that iteratively develops an empirically grounded TSI theory. The following timeline events, milestones and interdependencies are of particular importance:

- This third WP5 deliverable is preceded and informed by the development of TRANSIT proto-theory. The completed deliverables D3.1, D3.2 have informed the chosen approach of Critical Turning Points (D5.1 and D5.2). The next phase of theory development is near-completed (D3.3 will be finalized by the end of July 2016), and informs the development of a meta-analysis framework for the subsequent steps in WP5.
- Together with WP4, WP5 forms part of a broader activity stream of empirical research, involving partly overlapping populations of researched SI actors. The second batch of in-depth case studies has been completed (D4.4). The database will therefore also contain links to the 20 in-depth case studies conducted for WP4.

- The final WP5 milestone of meta-analysis conclusions (D5.4) is closely connected with the final deliverable for WP3 (D3.4) and ongoing WP2 work on the transversal themes: the meta-analysis tests and informs proto-theory and will be structured through these analytical themes and propositions.
- As an online repository that is integrated with the TRANSIT Resource Hub, the database contributes to the engagement and communication activities undertaken through WP6. Along with its development as a tool for meta-analysis, we have therefore been elaborating ways to enhance its various learning potentials. Moreover, several steps have been made to explore how the database or elements of it can be adopted/elaborated by third parties, to ensure its continuity beyond the duration of the TRANSIT project (see D5.2 and Chapter 4).

The WP5 planning towards the meta-analysis (D5.4) is strongly shaped through the construction of the database configuration. The configuration creates a path dependency. Once materialized and filled with large quantities of empirical data, it will be difficult to adapt. Likewise, there is the path dependency created by the set-up of the data gathering: The research guidelines of September 2015 have established a framework that has circumscribed research units, quantities of data to be gathered, practical guidelines, a procedure for monitoring and feedback on the research process and a template for data gathering (Cf. Pel et al. 2015b). The list of research questions and topics ensures that all 480 accounts of Critical Turning Points will contain data on the following dimensions of CTPs: Description, Co-production, Related events, Anticipation, Contestation, and Learning. ULB, AAU and UDC researchers each have guided 4 institutes to ensure adequate data gathering, and in particular conformity to the guidelines taking in account that there are unavoidable differences between the completed templates, as different researchers have been involved in empirical data gathering and different initiatives and contexts have been investigated.

Once online and ready for deployment, the database will therefore require further harmonization of its contents. Related to this, it will need to be equipped with a structure of key-words (which we refer to as *tags*) that enhance specific database searches, and file structures that match this key-word structure. Between data gathering and database deployment, there is thus an inevitable phase of *preparing the data*. We have therefore adopted the following 3-steps approach:

1) **Data gathering**. This has taken place between September 2015 and June 2016, which researchers have registered in CTP templates (Word files). As substantiated in Chapter 3, basic information has been inserted on 80 social innovation initiatives (their logo's, location and basic description). Researchers have also provided samples of (1.0 version) CTP files. This provides WP5 (co-)leads and database developer with a first overview of the dataset, and allows to assess the need for further harmonization between CTP files. For the researchers this rounded-off phase means that they have now access to the database, have their own workspace it, and can explore the analytical possibilities afforded by the dataset.

2) **Preparation of CTP files.** This preparation for database deployment will take place between June and October 2016. It involves the insertion of key words or 'tags' to the files, and the polishing of files into informative, clear and harmonized data. Simplified, the operation of tagging the content of the online files can be compared with the coding step of qualitative data before they can be submitted to quantitative analyses (such as the ones performed by data analyses programs, e.g. NVIVO). Alongside, WP5 leads and database developer adjust the database structure, and the list of search terms is developed in collaboration with WP3 and WP2 researchers to ensure maximum relevance to theory development. In particular, the keywords/tags will flow from the currently ongoing finalisation (scheduled for July 2016) of theoretical propositions in WP3. The WP5 team

will craft guidelines for this phase 2, including a list of key words to apply to the files, a procedure for checking data with interviewees, and guidelines for the polishing of the CTP texts. These ensure that researchers' additional data entries beyond phase 1 run as smoothly as possible.

3) **Conducting the meta-analysis.** The meta-analysis builds on a complete and welldeveloped set of CTP files in which he content is marked/coded with key words/tags, and a framework for meta-analysis. Similar to the Theoretical Integration workshop organized to iterate between WP3 and WP4 proceedings, this phase will work towards a Theoretical Integration workshop iterating between WP3 and WP5, scheduled for 3-7 April 2017. The meta-analysis will be conducted as preparation for that workshop: Between October 2016 and March 2017, leads of WP5, WP3 and WP2 will be testing and exploring a set of propositions and analytical themes on the basis of deliverable D3.3 (due July 2016). Alongside this meta-analysis process, WP5 leads facilitate TRANSIT researchers in their own deployments of the database and the various (comparative) analyses they are undertaking for publication purposes.

Before ordering the various WP5 activities through a timetable, it is useful to distinguish four different groups of researchers, each with their own roles to play in the WP5 process.

1. Meta-analysis team: This team consists of WP5 leads ULB and their WP5 partners AAU, IHS, UM and UDC. This team has been occupied with developing the CTP concept and basic set-up, and the database configuration as developed in this document. Further activities are the gatekeeping i.e. quality control for the database entries, the further development of a meta-analysis framework, provision of first database entries, and the implementation and reporting on the meta-analysis itself.

2. Database development team: This team consists of WP5 leads ULB, the contracted database developer, and IHS. The team ensures that the current database configuration if further elaborated into a form that is attractive and informative to various user groups.

3. Researchers. This involves the whole consortium; all TRANSIT researchers have been involved in the empirical research on the CTPs. After the substantial efforts in data gathering, the main task left is the completion of the data entries and their preparation for meta-anlysis. Apart from generating database inputs, researchers also have a role in the promotion of the database, and its added value to the initiatives and networks that are displayed in it. Finally, all researchers are intended users of the database, and potential contributors to the meta-analysis.

4. Engagement & communication team. Apart from its meta-analysis function, the CTP database is to be useful to various groups of practitioners as well. It is a potentially important vehicle for the engagement and communication activities of WP6. This is mainly a task for the WP6 team, in collaboration with WP5 leads.

These activities, and the researchers involved, and displayed in a timeline below (table 2.2). For the researchers, the period between September 1 2015 until June 2016 has been the most important and intensive period of WP5 activity. For the meta-analysis team it is rather the coming period towards the completion of the D5.4 deliverable that is the most intensive period. The activities of database development team will be finalized once the

meta-analysis phase starts, whilst the activities of the engagement & communication teams can intensify once the database is online and deployable beyond TRANSIT users.

Time	Activity	Researchers involved	
End July 2016	D3.3 submitted	WP3 team	
Early August	Guidelines for data preparation disseminated	Meta-analysis team	
2016			
October 1 st 2016	Database configuration finalized	Database development team	
October 1st 2016	Data preparation completed	Researchers	
November 1 st	Meta-analysis framework ready	Meta-analysis team	
2016			
December 1st	List of database deployment/publication	Researchers/meta-analysis	
2016	projects established	team	
Mid January	List of engagement activities established	Researchers/Engagement &	
2017		communication team	
February 1 st	Abstract comparative CTP paper submitted	Meta-analysis team	
2017			
March 1 st 2017	Meta-analysis inputs + program for TIW III	Meta-analysis team	
	ready		
March 1 st 2017	D5.4 submitted	Meta-analysis team	
Mid March 2017	First drafts of WP5 related publications ready	Meta-analysis team	
3-7 April 2017	Theoretical Integration workshop III	Meta-analysis team	
May/June 2017	Database online	Database development	
		team	
May/June 2017	First CTP database learning session organized	Researchers/Engagement	
		& communication team	
Early September	Database learning lab @TRANSIT Final	WP5team	
2017	conference		
End October	CTP database learning potentials paper	Paper authors	
2017	finalized		

Table 2.1Timeline of forthcoming WP5 activities

3 CTP repository: Population

3.1 Introduction: Critical Turning Points for process-oriented meta-analysis

This chapter describes the structure and contents of the CTP database. As elaborated extensively in the deliverables D5.1 and D5.2, the Critical Turning Points approach to the meta-analysis amounts to a process-oriented approach. The key functionality of the database is that it allows users to analyse, reflect on and compare the timelines of social innovation initiatives. The timelines are the basic ingredient for practically and theoretically oriented users to work with. Beyond this basic information, the second key element of the database is the theoretically informed way in which the accounts of Critical Turning Points are structured. They can be considered 'critical' on various grounds, they are co-produced in different ways, they are connected to other events in different patterns, they involve different kinds of contestation, they have been well foreseen or rather came unexpectedly, and individuals from social innovation initiatives have drawn various lessons from them. Comparisons can be made across networks and contexts.

In the following we describe the current contents of the database through screenshots of its content management system and the display of information. We also explain briefly how these contents can be elaborated and enhanced through refinements in the database configuration. The most important function of this chapter is to provide an overview of the dataset. This informs the subsequent meta-analysis, and accounts for the substantial amount of empirical data that has been gathered.

First we describe the diversity and geographical spread of the 20 social innovation networks and the 80 local manifestations included **(3.2)**. Second, we describe how this yields a dataset of 480 accounts of Critical Turning Points, structured along six key aspects and provided with metadata on how they were generated **(3.3)**. Third, we describe how the database generates timelines that can be expanded and collapsed. The 80 timelines are each structured by 6 CTPs, but also contain 'related events' that make for richer and more detailed sequences of events **(3.4)**.

3.2 80 Social Innovation initiatives

Comparing across contexts

The CTP database contains 80 social innovation initiatives; 4 local manifestations per transnatinal network. This population extends the population of 40 local manifestations already studied for the WP4 in-depth case studies (Cf. Jørgensen et al. 2016). The CTP database partly builds on the WP4 population, but also extends it. Together the TRANSIT researchers have achieved in broadening the geographical spread of the initiatives studied to a significant degree. The screenshot below shows how the database presents a map with all the locations of initiatives on it. A click on the indicated initiatives leads directly to the description of the initiative and its timeline. The map functionality enables database users to select initiatives in particular countries and regions. An additional value is that this geographical display communicates in a clear and visually attractive fashion how TSI theory is developed in a context-sensitive mode.

In its current state, there are still a few geo-locations missing in the files. In any case, the map displays clearly how TRANSIT research focuses on cases in Europe and Latin America. A few initiatives are on other continents, and altogether the number of different countries covered has about doubled compared to WP4 research. Of course it needs to be explained to database viewers that the map does not reflect a systematic coverage of national contexts – the research has focused on initiatives operating in more or less less local environments. TRANSIT researchers can clarify the relevance of national/continental contexts by adding the results of their various comparative/transversal analyses.



20 transnational social innovation networks

The CTP database covers all 20 transnational social innovation networks researched earlier for the WP4 in-depth case studies. Their logos are used to visualize the diversity of initiatives that is brought together in the database, and to provide a certain identity to the CTP accounts. Links to the corresponding WP4 case studies provide more in-depth information on these networks, which themselves are not researched in WP5 as it focuses on their local manifestations.

The use of the logos has to be done with care, however. The four local manifestations featured in the database for each of them do not always have very strong relations with the networks. The networks do not always represent the local manifestations, nor can these 'local manifestations' be taken to represent the networks. TRANSIT has studied them as embedded actors, along a methodology that made them comparable as 'locally rooted and globally connected' actors, but these collectives and networks are not as homogenously ordered like the franchises of McDonalds. These issues of representativeness and attribution need to be explicitly addressed in the database portal. The final online configuration will therefore contain a disclaimer to counter-act unwarranted attribution, and it will contain TRANSIT researchers' methodological-theoretical explanation of the notions of SI networks and local manifestations.



80 social innovation initiatives.

As indicated through the map, the CTP database contains 80 social innovation initiatives. The same considerations apply as indicated for the 20 networks. Also in this case, there is a great communicative value of using the visual identities that these local initiatives have created for themselves. As displayed in the example below, the logos are complemented with a basic description of the initiative. The link in the description allows the database user to click and be directed immediately to the timeline of the particular initiative. Database users can thus focus on particular networks and initiatives that they are interested in.

Also in this regard it is important to contextualize the information presented. Accounts of Critical Turning Points are attributed to specific initiatives, yet they have been reconstructed through interviews with particular individuals (sometimes several of them) that are members of these initiatives. Importantly, these individuals cannot be assumed to entirely represent and speak on behalf of the initiatives. Likewise, it needs to be acknowledged that the logos are somewhat suggestive of coherent and consensual identities that do not necessarily reflect the perceptions of all initiative members – as far as the collective is constituted through formal membership. These issues of dispersed agency and unstable entities are key elements in the TSI theory as it has been developed thus far: TRANSIT researchers will therefore not only insert disclaimers, but also provide expositions on these topics that provide depth and context to the data disclosed through the database.



3.3 480 CTPs

480 Critical Turning Points

The CTP database will contain 480 Critical Turning Points, six for each of the 80 initiatives. As will be shown in section 3.4, the key way of presenting these CTPs is to display them as parts of timelines. Their information value is highest when presented as (sequenced, patterned) clusters of six CTPs, pertaining to the TSI 'journey' of a particular social innovation initiative. Still it is also insightful to consider them as 480 unique data entries, irrespective of the TSI journey that they form part of. The screenshot below displays a segment of the list of CTPs currently in the database. It brings out the diversity of CTP events contained in the database, which in itself is informative about the many different kinds of events that can be experienced as somehow critical turning points in TSI journeys.

Considered as a diverse set of 480 unique events, it can be explored, analyzed and eventually quantified how often certain types of CTPs occur. Adding such analyses TRANSIT researchers to the 'raw' data presented in the list, database users can contextualize the data, learn about some basic kinds of CTPs, and reflect on the kinds that might be missing or relevant to add. Such analysis on the N=480 also informs theorizing on the kinds of CTPs that are apparently the most salient and evident to SI initiatives, and the kinds that are brought forward by various TSI theories.

134	CTP1: The formation of ShareBloomington
135	CTP2: The establishment of a Tool Library
136	CTP3: Realization that more consistent members are needed to run different
137	CTP4: The formalization of Timebank in ShareBloomington
138	CTP5:Connection with BloomingLab
139	CTP6: The forming of a seed library
☐ 140	CTP1: Darren Sharp becomes Australian Editor of Shareable
141	CTP2: Melbourne Mapjam
142	CTP3: Melbourne ShareFest

CTP metadata.

The 480 CTP accounts are all entered through a procedure in which these files are provided with metadata that clarify how they have been created. The screenshot below shows the 'metadata' category, next to the basic information provided under 'properties' and the more extensive file contents of 'content' and 'related events'. The metadata are important to include as a way to account for the way in which the CTP files have been created – through a particular interviewer/analyst, and through a particular interviewee (or interviewees). The category of 'position interviewer' provides for a degree of clarification regarding the issues of representation and attribution (see previous section). The category 'interviewee' will be anonymized if interviewees demand this, however. Especially as the database will be online, it is essential to respect the rights of interviewees and the confidentiality principles involved with research. The precise display of this metadata-category, as well as the other contents, will be checked with interviewees before the database goes online in 2017.

	(
Properties	Meta	Content	Related events		
Date interview		03-03-201	6	i i	
		[
Name interviewer		Bonno Pe			
Namo int	ondouoo	Ciir Hooiin	adkara		
Name int	erviewee		Idreis		
Position int	erviewee	recent VB	member/ crowd-funded e	operimentation broker	

Rich accounts of CTPs: Six categories

The 480 CTP accounts in the database constitute points in time or events that provide rich accounts of TSI 'journeys'. Each of these accounts consist of six aspects CTPs, as laid down in the template for data gathering (Cf. Annex 2). CTPs can be considered 'critical' on various grounds, they are co-produced in different ways, they are connected to other events in different patterns, they involve different kinds of contestation, they have been well foreseen or rather came unexpectedly, and individuals from social innovation initiatives have drawn various lessons from them. The screenshot below shows how the template data are inserted in the database. Each of the six categories consists of 400-600 words' length of text, comprising telling quotations of interviewees as well as researchers' summary observations. This structuring through categories facilitates specific comparisons on certain dimensions of CTPs: Focusing on the category of co-production for example, it can be analyzed through what kinds of actor constellations and societal developments CTPs have been reported to be produced.

The displayed data insertion screen makes it immediately clear why a phase of data preparation is needed before considering the database population completed. The text in the boxes appears chaotic through the interspersed use of italics, regular and bold text, intermediate conclusions or key observations are not highlighted, and there is no clear structure of paragraphs. Other samples of CTPs show how TRANSIT researchers inevitably have applied different lay-outs, structures and style. Further harmonization is needed, if only to arrive at a way of presentation that is more appealing and clear to users.

Short introduction	The CTP is about the publication of the article 'Why we should give free money to everybody' by the critical author Rutger Bregman https://decorrespondent.nl/10/Waarom-we-iedereen-gratis-geld-moeten-geven/384450-0b1c02bd .	i
	42 characters left from 265	
Content	B I ≔ ≔ % % - Paragraph ▼ Formats▼ 🖺 🗟 🖽 ⊞ ▼ ¶ 🖪 🦘 🐡 🛷	
	The CTP is about the publication of the article 'Why we should give free money to everybody' by the Bregman https://decorrespondent.nl/10/Waarom-we-iedereen-gratis-geld-moeten-geven/384450-0b1c0 published on 14/10/2013, in the online critical journalism bulletin 'De Correspondent'. According to the CTP because this article reinvigorated a societal discussion on the basic income social innovation that that base a very much read and discussed article. With that article the discussion on the basic income which for a long time had been silent, really took off again. It has also been translated into English, re prizeThis article has really brought home that that basic income, that it really is something. Before the just not even mentioned in the media, and now it suddenly became a hot issue". The article gave an in Dutch basic contributed to the particular turn towards basic-income inspired experimentation and through the activist call of "why don't we just do it". The article "also referred to many examples of our place", so it reminded the public of experimentation undertaken elsewhere, and the existence of basic is the world. The CTP exhibited a contain and estimate and framing of heavier provide a string and framing of heavier provide activity of the public of experimentation undertaken elsewhere, and the existence of basic in the world. The CTP exhibited a contain according estimates and framing of heavier provide activity p	e critical author Rutger 12bd . The article was ne interviewee, it was a th thad faded way. "well, ome in the Netherlands, ceiving a publishing that, for a long time it was mportant impulse to the l its visionary-utopian pragmatic activism, ther experiments taking income initiatives in other Words: 249
Co-production	B $I :\equiv \equiv $ Paragraph Formats	n a topic nearly non- I, and the European civic the ground, through

3.4 Timelines: CTPs and related events

CTP Timelines: Six turns in an 'innovation journey'

The key feature in the CTP database is the generation of timelines. The screenshot below displays how the 80 CTP timelines are presented to the user. These timelines are generated automatically on the basis of researchers' insertion of names and brief descriptions of CTPs (the text boxes), and the estimate moments or periods in time at which these took place. Researchers have generally registered sets of CTPs with a certain spread over the overall timeline covered, and with a certain diversity in the kinds of changes involved. The screenshot shows how the CTP database presents concise and visually insightful accounts of innovation journeys, requiring only a little scrolling to oversee the whole timeline. The text boxes provide links to the full accounts of CTPs ('read more'), but in the default display mode the CTP timelines are presented in collapsed form.

This form of display has formed a starting point for the continuous design process undertaen with the contracted database developer. The display speaks for itself, to a large degree. Similar to the issues raised regarding the use of logos however, there is a need for TRANSIT researchers to add certain disclaimers, and an opportunity for bringing out the process-theoretical thinking on Transformative Social Innovation processes that underlies these timelines. The timelines linear, apparently stepwise display is a suggestion to be commented upon, for example. Likewise it could be discussed how the demarcation of the timelines affects the account given of a TSI process: The starting point of a certain SI initiative is not necessarily the starting point of a societal transformation processes that it engages in. The timelines will typically be used by TRANSIT researchers as elements in their analyses – and examples of such analyses could then be included as ways to contextualize the 'raw' timelines.



Timelines expanded: CTPs and their 'related events'

In the default display, the CTP database will show timelines with six briefly described CTPs. As can be seen in the screenshot below, these CTPs can be expanded, however. By clicking on the '9 related events', the database user is presented with the timeleine events displayed in black. In the particular CTP account there were only subsequent events mentioned that were evoked through the CTP, but the CTP research also comprised earlier events that 'made the CTP happen' (see CTP questionnaire in Annex 2). The interface for CTP data entry (see section 3. 3, 'CTP metadata') provides a separate functionality for this, in which the 'related events' can be entered in DD/MM/YYYY format. The important added value of including these 'related events' is that CTPs are shown to be parts of more encompassing processes and 'journeys', rather than as isolated events. The extended timelines allow for deeper analysis of sequences of events, of developments, sudden crises, phases of accelerating evolution, etc.

The more 'related events' included, the greater the scope for analysis of these issues of temporality. The inserted samples of CTPs serve to assess the average quantities of related events included in the CTP files – which greatly depends on the particular and the ability of the interviewees to recall these events. The phase of 'preparing data for analysis' can be used to achieve further harmonization in this respect. In any case, the 'related events' make for a much larger quantity of events beyond the 480 CTPs. TRANSIT researchers' analytical deployments of these related events could be used to exemplify how this expansion of the CTPs can increase the understanding of TSI journeys.



4 Realizing the Learning Potentials

4.1 Introduction: opening up the Survey

As indicated earlier in Chapter 2, the construction, population and deployment of the CTP database has entailed certain deviations from the DOW specifications that make the step from data gathering to deployment of the populated more difficult and effectively more time-consuming. In Chapter 3 it has been explained though how the development of 480 structured CTPs and 80 time-lines is not compromising on the larger-N ambitions, and fundamentally more in line with the kind of theory development and engagement with practitioners that TRANSIT is striving for. More generally, the CTP database can be considered an approach to the WP5 meta-analysis that complicates the originally envisioned survey – crucially motivated by the conviction that this increases the learning potentials of such time-intensive and costly larger-N data gathering project.

The CTP database project opens up the survey, reaching for learning potentials extending well beyond the circle of the TRANSIT researchers who gather the data. In the DOW planning for an online database, this online property has been interpreted as a fundamental starting point for the subsequent shaping of the database structure and deployment. After all, the online presentation of data involves communications with several groups of people and knowledge interests, and it raises various communicative challenges for TRANSIT researchers – who acknowledge framing and knowing to be important dimensions of Transformative Social Innovation processes. This chapter briefly describes how we seek to further develop and realize the learning potentials of the CTP database. First we distinguish four groups of database users, with different knowledge interests. This reminds that the development of the online database amounts to the development of a knowledge infrastructure, and a network of actors to be served **(section 4.2)**. Next, we provide a brief overview of envisioned activities to realize the learning potentials, as they have come forward through reflection on the actor map **(section 4.3)**.

4.2 Learning potentials

In deliverable D5.2 (Pel et al. 2015, section 3.3) we stated explicitly how the CTP database would first of all have to serve the TRANSIT meta-analysis – whilst also acting as a vehicle for transdisciplinary knowledge production.

"Summarizing our considerations, we propose that:

- 1. First and foremost, the database needs to facilitate the TSI-theory development, in which we are interested in Critical-Turning Points.
- 2. The database as a product can facilitate reflexivity of different actors onto TSI processes, and the systems, actors and developments involved.
- 3. TRANSIT-researchers engage with other actors to consult on the inputs, outputs and deployment of the database aiming for a collective process within the practical and conceptual limits of the TRANSIT project.

- 4. The database is to be complementary with the TRANSIT-website. This Resource Hub already provides various knowledge-resources on (transformative) social innovation, which the CTP repository could help to disclose in an insightful and exciting way.
- 5. The CTP concept needs not only to be explained, but also possibly to be developed further for it to connect with various audiences and their knowledge interests".

The various audiences and knowledge interests identified were the following: TRANSIT researchers, the initiatives researched and described in the database, other initiatives, other researchers, intermediary organisations, policymakers, and the general public. We have developed this more extensively in the working paper Pel, Bauler & Dumitru (Cf. Annex 1), deploying insights from the sociology of knowledge to clarify the practical challenges. The map below indicates how the database architecture, the system itself, can be considered as a central 'actor' that can serve, and mediate between, various actors with different knowledge interests.



Figure 3.1: CTP database map: Actors and interactions

The map helps to structure the various tasks and challenges for the realization of the learning potentials:

- There are several learning potentials, involving various kinds of knowledge interests
- The database contents are important, but it is no less important to consider the way the data are presented to different groups of users (Cf. Chapter 3 for various measures to contextualize the data).
- Some users will deploy the database online, but the learning of some groups of users may be enhanced through interactive sessions in which TRANSIT researchers mediate between the database and the users.

• The database in its final form is likely to serve some knowledge interest more than others; TRANSIT researchers should reflect on this and identify the potentials and limitations, especially in the light of future deployment and re-use of certain parts of the database.

The above map and the associated questions are important to explore together with a broad range of actors, approaching it from different perspectives. The database construction in the technical sense is an activity for WP5 leads and contracted developer. The empirical research has been a collective effort of TRANSIT researchers (in collaboration wit the initiatives agreeing to be interviewed for the research). The development of learning potentials is much less an issue to resolve by the TRANSIT researchers alone, however: It is crucially a matter of exploring with the initiatives researched, with policymakers and with other researchers how the database could be a vehicle for their particular learning ambitions regarding Transformative Social Innovation.

4.3 Implications for architecture and deployment

As the database configuration and its population are well underway, the learning potentials of the database have been shaped to a large degree. The point from which to proceed is the dataset described in Chapter 3. Following the actor map, there are then five clusters of activities through these learning potentials can be developed further: Elaborating the database architecture itself, and developing the learning potentials for the four groups of knowledge interests. We will discuss these one by one, indicating activities in this direction that have been already undertaken and activities envisioned. The joint design exercise at the TRANSIT Social learning workshop (see Annex 1) and the interactions with the SIAC initiative (Pel 2016) towards database construction have been important inputs for this.

Database contents:

A key set of activities is of course the preparation of data (Cf. Chapter 2), for which the data entry system is currently in place. In conjunction with those activities, it needs to be considered further how to shape the user interface: the database search functions, and the output formats. A third cluster activities comprises the various ways of contextualizing the raw data (Cf. Chapter 3). This includes disclaimers on representativeness and attribution, but also the inclusion of explanatory texts on theoretical and methodological backgrounds, links to documents in the Resource Hub, and analyses of TRANSIT researchers that exemplify how the data can be deployed. A great part of these activities have already been scheduled in the task-scheduling platform that the database development team is using for its continuous design process with the database developer. The screenshot below shows how tasks are listed as 'to do', 'doing' or 'done'.



Researched initiatives:

This set of activities is to materialize the TRANSIT commitment to do research *with* the surveyed population of initiatives, rather than only about them. This has already taken effect through TRANSIT researchers' dialogues with the included initiatives about the identification and demarcation of CTPs, and their timeline reconstructions with interviewees. As a corollary of this, the final accounts of CTPs will be checked with the initiatives. Important next steps are the CTP learning sessions that researchers can organize with their initiatives, their written feedback to the initiatives or their papers. A particularly important learning potential seems to be the scope for reflective monitoring regarding initiatives' development. For this we will consult the TRANSIT Knowledge Group members, once the data preparation phase has been rounded off.

A separate set of activities is the exploration of ways to have the database taken over by other SI initiatives, beyond the duration of TRANSIT. ULB and IHS researchers have explored this through meetings with members of the Social Innovation Accelerators in Cities (SIAC) network and the Sociale InnovatieFabriek (SIF) in Brussels, who are in the process of developing their own social innovation-related knowledge infrastructures. These interactions have started in October 2015. An important insight gained is that complete 'handing over' runs into various difficulties, but that elements and underlying principles can very well be transferred.

Other interested parties:

The screenshots of the populated database show how the system will present data that in many ways requires disclaimers and further explanation if it is to convey understandable, relevant

information. Taken at face value, the presented data will not communicate the nuanced understandings of TSI processes developed in TRANSIT theory development – such as the insight that transformative change is co-produced, rather than achieved through social innovation initiatives alone. It is important to contextualize the presented data for policy makers, ideally through small-scale workshops and summary reports. One important activity will be the organization of a CTP 'Lab' during the TRANSIT final conference, in September 2017.

The database will also be used by the broader public, however, and this underlines the importance of providing the contextualization through the user interface itself. The database should stimulate reflection on the timelines, convey the experiences of being involved in TSI journeys, and allow for exploration. The welcoming page or 'dashboard' should actively direct this broad groups of users towards resources that contextualize the data.

Other researchers:

The CTP database is an online system that as such responds to calls for open-sourced and shared research. For the broader field of social innovation and transformation research, the dataset provides a valuable opportunity for comparative, larger-N research. This helps meet the challenge of moving beyond fragmented and anecdotic evidence from single cases, and makes use of the technical tools available for larger-N research. An early activity has therefore been to consult the DANS (Dutch research data archiving foundation) in the Hague for advice on future storage, disclosure and deployment of raw data (August 2015). An important conclusion from this was that such continued storage is very well possible, but that it is crucial to publish a background document on the set of raw data. This corresponds with the 'contextualization of data' discussed earlier.

An important consideration for TRANSIT is however that the CTP interviewing creates serious commitments towards the interviewees, local manifestations and networks included in the database. The qualitative data in the CTP files is sensitive. This implies that database contents will only be opened up for consultation and basis for publication under strict conditions. One way to strike a balance between open research and confidentiality commitments is to actively pursue joint research activities of TRANSIT researchers and outside researchers.

TRANSIT researchers:

The CTP database rests on a collective effort by the whole TRANSIT consortium to arrive at a large set of harmonized data that is of sufficient quality to inform theory development. As the data entry has started, the database has become a commonly accessible resource. The next challenge of captalizing on the learning and analysis potentials will be taken up primarily by activities of the meta-analysis team, but by the broader group of researchers as well.

WP-leads and meta-analysis team will be working on a meta-analysis that informs TSI theory development, which will be concluded with deliverable D5.4, the third Theoretical Integration Workshop and the final WP3 deliverable (Cf. Chapter 2). Important work in this regard is the construction of a relevant set of keywords and the construction of theoretical propositions that link the CTP data and the theoretical framework and propositions laid down in D3.3. In parallel to this, researchers will be encouraged to disclose their publication plans related to the CTP data, and WP5 leads will support their analyses. This can be done by providing literature resources on process analysis, by discussing ways to match research topics with data subsets, by establishing an overview of the various writing projects, and by charting the overlap and connections with the

meta-analysis activities. Moreover, the WP5 leads will seek to ensure continuous development of the stock of background materials available – the so important 'contextualization of data' is achieved best by providing analyses made by the TRANSIT researchers.

The D5.4 deliverable will be built up from the meta-analysis proceedings. Conference papers and articles by the broader group of researchers will still be in progress by then, but an overview of abstracts will be included.

ANNEX 1: Working paper learning potentials

Pel, B., Bauler, T. & Dumitru, A. (2016), Making sense of Transformative Social Innovation dynamics; learning potentials of the Critical Turning Points online database,

TRANSIT Social Learning transversal theme workshop, June 8th -9th 2016, A Coruña (ESP)

1 Introduction: Knowledge infrastructures for transformative social learning

Societal challenges like sustainable development, social inclusion and economic equality remain difficult to meet through existing institutional arrangements. A broad variety of initiatives towards social innovation has emerged that seeks to introduce new ways of doing, organizing, framing and knowing to better meet these challenges. Whilst some of these initiatives can be considered extensions of existing institutional arrangements, some others are rather transformative in nature – seeking to challenge, alter, replace them or to establish their initiative as a complementary set of practices (Haxeltine et al. 2016). Such transformative social innovation (TSI) raises tough questions of how and under what conditions social innovations can have transformative impacts, and how situated actors can be empowered in their transformation attempts.

These questions after TSI and its associated complex transformation processes are challenges for researchers and practitioners alike. As has been argued, such transformative knowledge cannot be developed within the confines of mono-disciplinary approaches. Moreover, it requires tapping from a broad variety of knowledge, across the traditional divide between expert and 'lay' knowledge (Nowotny et al. 2001; Moulaert & van Dyck 2013; WBGU 2014). Seeking to develop transformative social innovation theory through trans-disciplinary knowledge production, we also aim to stimulate social learning amongst those involved in social innovation processes. This social learning, understood as 'changes in beliefs, mindframes and strategies', can be considered the practice- oriented part of producing trans-disciplinary transformative knowledge. Beyond helping to understand TSI, we seek to empower actors in their transformation activities.

The joint development of transformative knowledge, whether as trans-disciplinary knowledge production or as social learning, can be enhanced through knowledge infrastructures. These resources for learning have evolved and continue to evolve rapidly. The formation of transnational social innovation networks has taken off significantly in the last decades, for example, with the internet and social media as obvious 'enabling technologies' (Jørgensen et al. 2016). Sharing and peer-to-peer platforms like Timebanks, Uber and Air BnB are constituted through network technologies, and SI initiatives can disseminate their new practices and ideas through webpages and social media. Fairly inconspicuous socially innovative events like a crowd-funded Basic Income can thus 'go viral' (Backhaus & Pel in progress). Visions of an internet-powered social innovation revolution, of a radically democratized 'internet of things' or a 'Global Brain' are asserting themselves as socio-technical utopias, in which information sharing, exchange of ideas, open debate and joint learning on equal footing are celebrated (Heylighen 2002). On a less idealistic account, knowledge infrastructures are not necessarily enabling factors, but also can be potential distributors of suggestive and untraceable 'out-formation' (Cf. Ezrahi 2004) that is liable to inducing *perverted* learning processes. For better or for worse, they are important mediators,

quasi-actors or 'actants' in social innovation processes. Shaping communication between human individuals, they make some realities more visible than others, they highlight and obscure, they help to expose and to observe, they represent and misrepresent, and they shape relations between those who monitor and those who are monitored (Cf. Pel & Bauler 2015). In TRANSIT we understand knowledge infrastructures as important forces in the societal co-production of ways of framing and knowing - and therefore of ways of doing and organizing as well (Haxeltine et al. 2016 in progress; Jasanoff 2004).

This paper presents a concrete example of the challenge sketched above, describing the development of a knowledge infrastructure for transformative social learning. We are in the process of constructing an online database with timelines of social innovation initiatives, which is to serve both researchers' and practitioners' knowledge interests regarding TSI. We seek to develop the learning potentials of this knowledge infrastructure, whilst remaining aware that advanced technology provides not unproblematic learning machines but rather elements in the co-production of more or less relevant and adequate knowings and framings of society.

Seeking to engage the reader in our design challenge, the paper is structured through a design logic: from basic principles to materialization. First we describe the major choices made thus far, articulating which learning potentials we have sought to inscribe into our Critical Turning Points online database (section 2). Next, we express these basic choices on the database architecture more explicitly as the design of a knowledge infrastructure. Mapping the database as a 'boundary object' that serves and mediates between diverse actors and knowledge interests, we explore how this technical artifact could fuel and catalyze a social learning network (section 3). Finally, we use the map to discuss how social learning potentials can be added, enhanced, and adapted, and what guidance can be given to database users – either in dedicated social learning workshops or online (section 4).

2 The Critical Turning Points online database: choices and potentials thus far

The following major choices express which learning potentials we have sought to inscribe into our Critical Turning Points online database:

A database for meta-analysis. Even if seeking to stimulate transformative social learning, our research consortium has started from the consideration that this social learning should be underpinned -and indeed preceded- by an elaborate comparative analysis across transformative social innovation contexts. This informed the idea to set up a database for scientific meta-analysis – be it online, so as to share it with the public.

Democratizing the survey. The initial idea to fill the database through a survey forms a particularly important background to our project. It was considered unsatisfactory on two accounts. First, there was the consideration that this would provide the public with bare numbers, de-contextualized data and eventually little understanding of and reflexive engagement with transformation processes. If fed by a survey, the database would convey little of our dynamic understanding of transformative social innovation, and little of the intricate realities of social innovation initiatives mapped through it. Second, there was the consideration that a survey would typically reproduce the 'ivory tower' mode of scientific practice, in which the researcher charts the social innovation territories, analyses them, and only then shares findings with practitioners/

research objects. Instead of the survey, with its low potential for engaging the surveyed in the surveying and learning, we considered that the database should be fed with lived-through experiences. The reconstructions of those are developed in dialogues between researchers and social innovation initiatives. Accordingly, the database contains both quotes from social innovators and analytical comments from researchers.

A process approach. A third defining choice has been to shape the meta-analysis through a process approach. This is a kind of knowledge development that we considered to be both practically and theoretically the most fruitful/adequate to transformation phenomena (Cf. Pel et al. 2015). Theoretically, it highlights that we are dealing with dynamic phenomena, unstable entities, relations that change over time and particular sequences of events that may lead to transformative outcomes of social innovation processes (Cf. Pettigrew 1997; Blatter & Haverland 2012). Practically, it speaks to challenges of anticipating new developments, interpreting internal and external developments over time, gaining awareness of repetitive patterns, and learning about developments that reinforce or cancel out each other. Identification of stable factors – either as 'barriers' or as success factors – would lend itself to easy instrumental advice, but crucially stifle reflection and awareness of dynamics. The database would therefore contain timelines of social innovation initiatives and their interactions with the outside world – to be built up through Critical Turning Points in their development.

Transformative social innovation as distributed process. Fourth, the database has been set up to elicit not only how social innovation initiatives develop over time, but also how they do not develop in isolation. Accounts of Critical Turning Points contain a description of why they were considered critical, which related events happened, whether they were anticipated and what was learned from them – but crucially also contain information of what other actors, organizations and developments made it happen. Asking respondents these kind of questions, and especially the latter one, is in itself a reflection-inducing activity: they are led to reflect on the situations of distributed agency they have been involved in.

Transformative social innovation across contexts. Finally, the database has been set up to contain 480 Critical Turning Points, pertaining to 80 social innovation initiatives aligned with 20 transnational networks. As visualized through a map on the welcoming page, the database enables researchers and the wider public to compare transformation processes as they unfold in various countries and regions – mostly in Europe and Latin America, but also on other continents. This possibility to compare across contexts has great potentials for learning, even if there is a well-known potential as well for introducing misleading ideas about cultures and nation states.

3 Mapping actors, knowledge interests and interactions

The database architecture as developed thus far is not just a way of crafting a data storage system or a practical tool. The choices highlighted above inscribe social learning potentials into the system, and they imply choices on a knowledge infrastructure that is to connect various actors with an interest in learning about transformative social innovation. As Star & Griesemer (1989) described in their exemplar case study on such shared knowledge infrastructure, the database construction can be looked at as an attempt to reconcile and connect different social worlds, i.e. different ways of being interested in the transformation processes gathered by the database. The following four groups of interested parties can be distinguished:

- 1) The TRANSIT researchers with their meta-analysis aims.
- 2) The social innovation initiatives and networks whose critical turning points are displayed in the database, seeking to learn about themselves and about others, but also possibly considering how others might be learning about and through them.
- 3) Other social innovation initiatives, policymakers and the general public. There various groups of actors who might be interested in learning from the timelines of social innovation initiatives, and they are not all SI initiatives themselves.
- 4) Other researchers, possibly interested in particular aspects of the TRANSIT meta-analysis or in particular social innovation initiatives.

The important point is that the database will never serve these knowledge interests equally, and that a favorable balance needs to be struck in the eventual shape of the knowledge infrastructure. A related point of Star & Griesemer's view is that the desired social learning and trans-disciplinary knowledge production within and between these groups of actors will not develop out of itself, but will require group-specific measures to arouse their interest for the database and its learning potentials. The challenge is to make the online CTP database into a 'boundary object', a polyvalent knowledge infrastructure that is *"both plastic enough to adapt to local needs and the constraints of the several parties employing them, yet robust enough to maintain a common identity across sites"* (Star & Griesemer 1989:393). The practical value of this sociology of knowledge perspective is that it helps to map the design challenge ahead of us. It helps to consider how the CTP database can become the vehicle for transformative social learning and trans-disciplinary knowledge production processes - provided it is well-positioned amidst various knowledge interests and is developed with a view on the interactions that could be undertaken around and through it.



Figure 1: CTP database map: Actors and interactions

4 Developing the learning potentials

The map above reminds us that there certain learning potentials already inscribed into the knowledge infrastructure (preferred over others out of certain ideas about how transformative social innovation can be known and should be understood). On the basis of these initial commitments, it can then be considered how to develop the many relations, interactions and learning processes that as yet remain potentialities.

Some relations in the map to develop further:

Researched initiatives: How to facilitate learning from each other, how to jointly reflect on their timelines, how to facilitate their further reflexive monitoring through timelines? How to involve non-English-speaking initiatives with English-only knowledge infrastructure?

Other interested parties: How to introduce, contextualize the presented data and how to invite them to join the reflection on timelines – possibly allowing them to post comments, or join workshops with TRANSIT researchers and SI researchers included in database?

Database contents: How to elicit broader significance of the gathered situated accounts? How to increase appeal through visualizations, simplifications, executive summaries, without betraying the TRANSIT ideas about the complexity and ambiguities of transformation processes? How instrumental will presented knowledge be?

Other researchers: How to present, frame, package the CTP files? Which backgrounds and disclaimers needed? Under what circumstances can database elements be deployed and published about, and under what conditions can what database elements been hosted by other than TRANSIT parties?

TRANSIT researchers: Whose learning, about what are priorities? Which are key lessons and essential principles to be maintained in learning, and what are the learning dangers to be avoided?

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ANNEX 2: CTP questions for empirical research

1. Contents. *What did this CTP consist of, and when (at what date or in which specific period) did it happen? In what way did it constitute a CTP?*

2. Co-production. *What particular events/people/developments/circumstances/conditions/* spatial environment made the CTP happen?

3. Related events. *What earlier events (coming from within or from outside) were crucial to the CTP to happen and when (at what date or in which period) did they occur? Which important later events were evoked by the CTP and when (at what date or in which period) did they occur?*

4. Contestation. To what extent did the CTP involve contestation? What was the contestation about, and which people/organizations (internally and/or externally) were involved in it? How (if at all) was the contestation overcome?

5. Anticipation. *Was the CTP, as identified now, also understood as CTP at the time when it occurred? Or is it an understanding that developed later? Had the events/people/etc. that evoked it been foreseen or anticipated?*

6. Learning. What are the change ambitions of your initiative, and how did the CTP make a positive or negative contribution towards achieving those? If you were to draw a lesson about this CTP, what would this be? How does it relate to the current challenges of your initiative?

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