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Abstract

Aiming for a successful transformation of opportunities and constraints into real benefits the Smart Mobility Procedure Model serves entire organizations, decision makers, designers, and promoters with a blueprint: six potential entry points support Smart Mobility initiatives. Entrepreneurs and solution providers have a different starting point and needs than government institutions and individual contributors. The Procedure Model takes those distinct viewpoints into consideration through checklists, hands-on material, and questionnaires. It applies the Building Blocks of Intelligent Mobility (BIM) that are the subject of the previous chapter. Moreover, it proposes a model to ease the discussion about institutionalization and juristically triggered aspects.

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Successfully deployed Smart Mobility offerings go hand in hand with a structured and systematic, but nevertheless, design-oriented process. Motives to engage in Smart Mobility are manifold. One is the need to combat congestion and emission issues. Another is the economic need to streamline investment decisions and attract companies and personnel into the region, and launch a commuter friendly and cargo driven intermodal program. We thus sort the motives along six fundamental themes:

1. Exploring new business opportunities, assessing existing business models and/or your own position in the context of mobility.
2. Reviewing, expanding and extending your own BIM in terms of potential market offerings.
3. Initiating and deploying Smart Mobility once the decision has been made.
4. Conducting a fitness check for your own ecosystem that outlines the degree of being prepared with respect to Smart Mobility.
5. Elaborating business opportunities to position your own technology and innovations to get involved in innovation projects and determine the market access potential.
6. Conducting a context check to compare the readiness of your own ecosystem with one or multiple ones. The context check is applicable to any BIM, subject, or theme.

The *Smart Mobility Procedure model* fosters the structural and methodological discourse along the above listed themes. The model defines sequence and options to apply the *BIM*. Company-owned and cross-organizational elements can be sorted and added where feasible and useful.

According to the above chosen listing, the addressees and entry points for any of the six themes are as shown in [Table 13.1](#). Nevertheless, initiators and interested groups in Smart Mobility might start differently and choose another order. This is purely driven by the maturity of your very own Smart Mobility engagements.

Table 13.1 Smart Mobility Procedure model – entry points

Chapters	Entry point	Addressees
13.1	<i>Explorative phase</i> : exploring new business opportunities, potential positions, and business models	Companies Public authorities
13.2	<i>Sound check</i> : map, adapt and expand own BIM solutions with Smart Mobility related criteria	BIM service providers for technology, services, and business processing
13.3	<i>Initiation phase</i> and Kick-off: decision has been made to execute and deploy Smart Mobility project(s)	Government owner Private businesses Consortium triggered co-innovation Project management Mobility managers

Table 13.1 (continued)

Chapters	Entry point	Addressees
13.4	<i>Fitness check</i> : compare your own mobility capability with other locations	Public sector entities Interest groups Project managers Mobility managers
13.5	<i>Market access check</i> : identification of potentially new markets and bundling possibilities for your own offerings	Inventors Entrepreneurs Start-ups
13.6	<i>Context check</i> : comparing your own with third party ecosystems	Publicly funded entity Privately funded entity Project managers Mobility managers

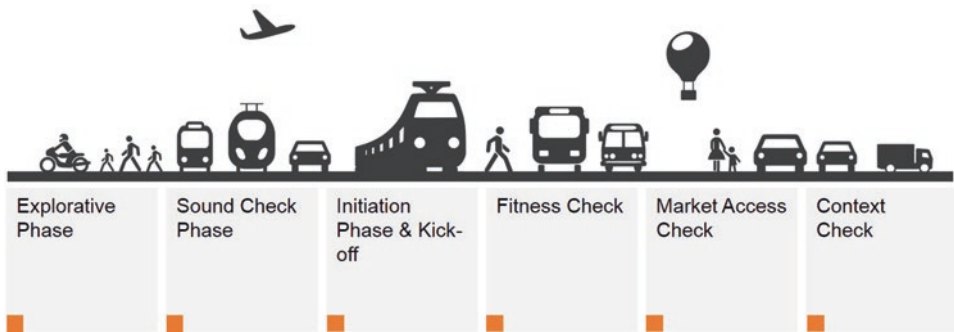


Fig. 13.1 Smart Mobility Procedure model – entry points

In the following, a detailed description of the relevant activities for each of the entry points is provided according to [Fig. 13.1](#).

Those BIM elements that are mission critical are outlined graphically for each of the six entry points in the subsequent sections. Apart from that the entire blueprint, the BIM as such, facilitates and supports the undertaking of Smart Mobility.

13.1 Explorative Phase

When considering Smart Mobility driven projects and efforts, the *Explorative Phase* is a good entry point (see [Fig. 13.2](#)). It is this phase’s main objective to gain insights into Smart Mobility, launch ideation contests, and gather ideas from an organization’s environment, its ecosystem, and its employees.

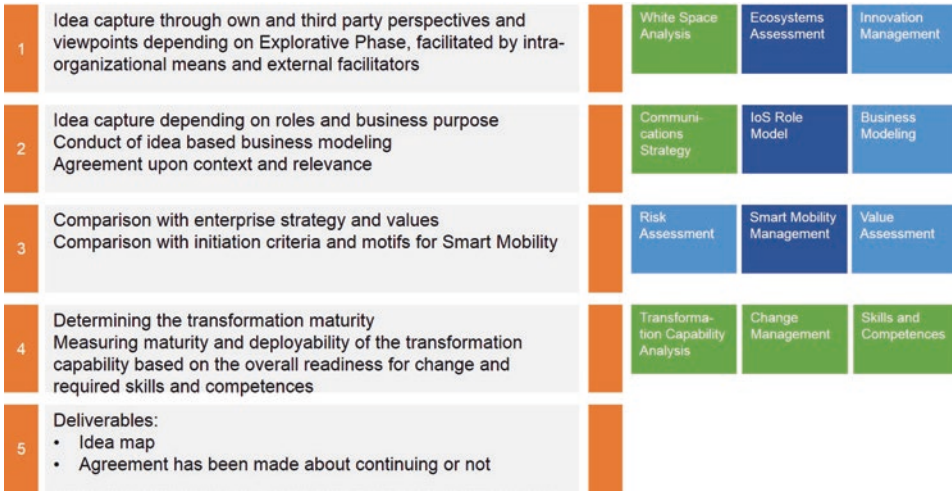


Fig. 13.2 Smart Mobility Procedure model – explorative phase

In this phase, project managers, team members, and experts apply intra-organizational and external creativity methods and techniques such as Design Thinking or Service Design. Those are applicable in a considerable low effort starting with a two-days workshop.

Results typically range from idea maps, game planes for organizational and transformational requirements, up to a transformational checkpoint and the resulting to-be-agreed-upon next steps. The transformational checkpoint governs firstly the issue and extent of a change management program and secondly the scope of skills and competences for Smart Mobility in relation to planned user groups and divisions. Thirdly it governs the nature of the Smart Mobility undertaking, for example through proof of concepts, before-after analysis, and the deployment planning on a local and regional scale. One further determinant, fourthly, is the decision about the involvement of external business partners and clients.

With respect to *business modeling* it should be noted that the first modeling is conducted under certain assumptions. Assumptions relate to primary and secondary business partners, the high level design of an offering for existing and future market penetration. The use of the *IoS Role model* sharpens the eye for connections, intersections, dependencies, and unknown territory in conjunction with further participants and influencers in the observed or targeted context. Modeling takes place in a staged approach. There will not be one single *business model*. It is expected that per role and positioning a minimum of one business model is identified.

13.2 Sound Check Phase

Existing mobility related solutions providers and service providers use the *Sound Check Phase* to reconcile their offerings with respect to the BIM elements. The necessary steps are depicted in Fig. 13.3.

Each of the steps of the sound check are illustrated in Fig. 13.4.

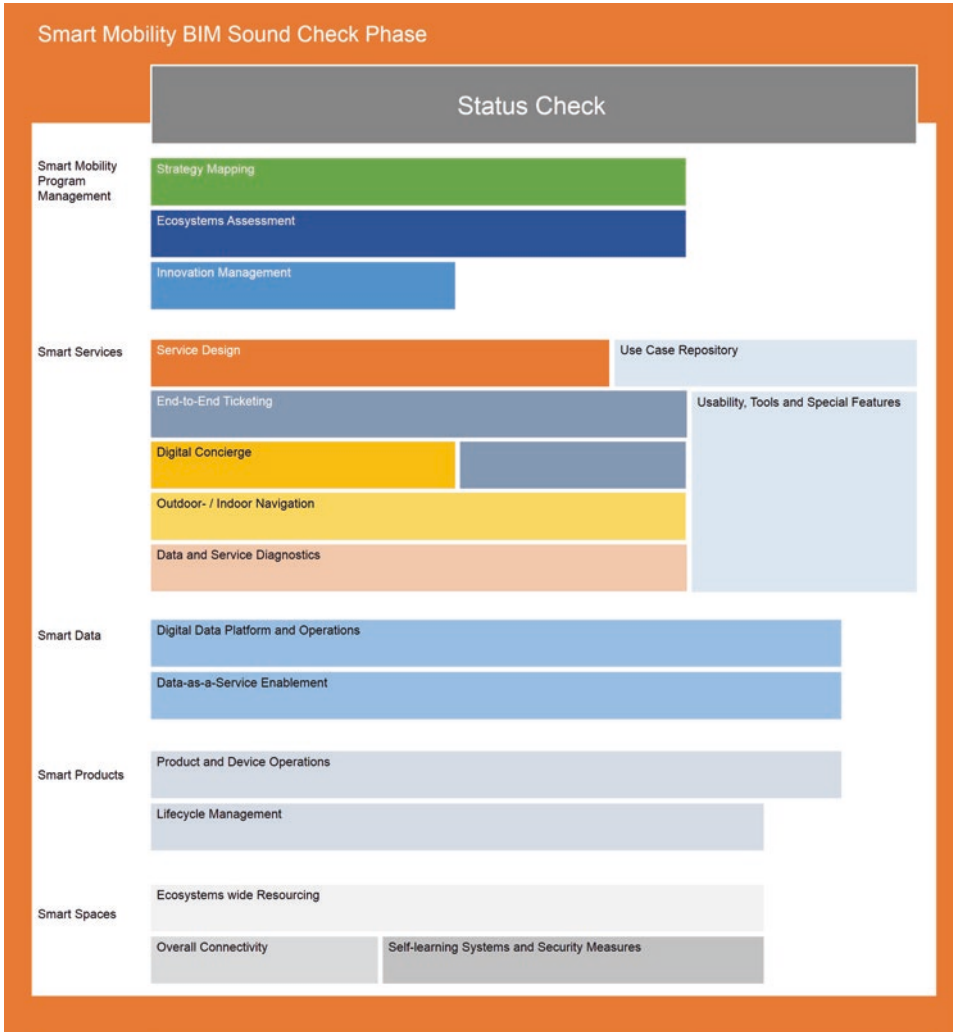


Fig. 13.3 Smart Mobility Procedure model – sound check phase – overview

13.3 Initiation Phase and Kick-Off

The degree of successfully deployed Smart Mobility initiatives correlates with the willingness to innovate and the willingness of the decision makers to deal with innovative, yet disruptive, offerings. These offerings can be of a functional and technical nature. In addition, they target the status quo of organizational and operational structures of business and government entities. Not only in Smart Mobility, but in all other contexts that target individual consumers and multi-industry ecosystems, the need for change and the willingness to embed change from the very beginning turns projects into successes.

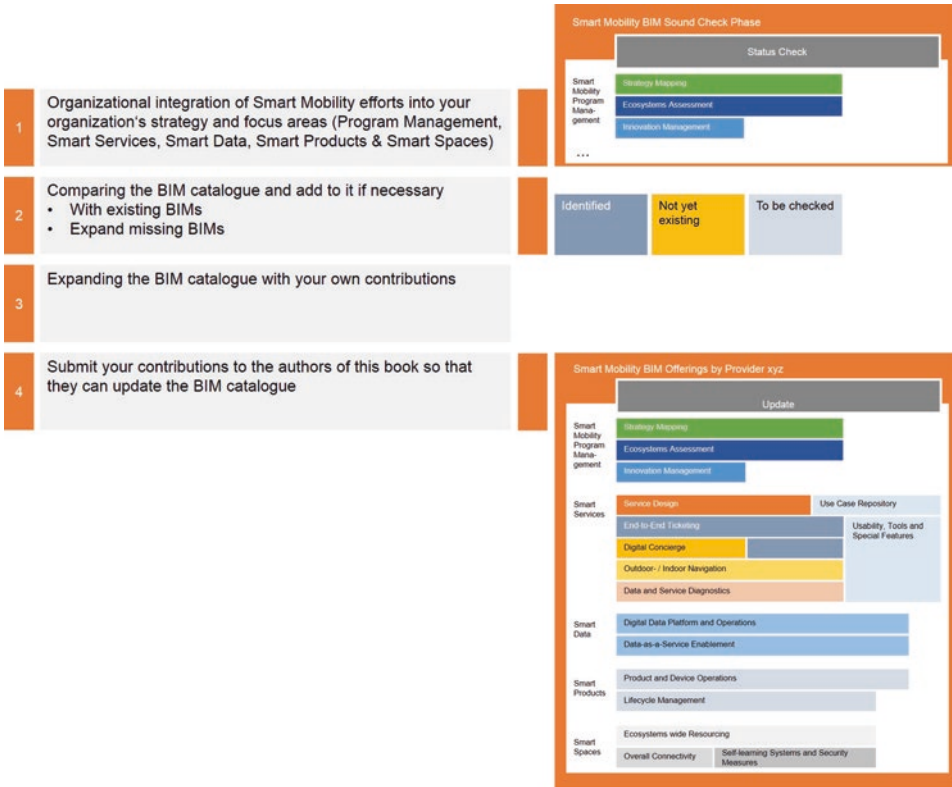


Fig. 13.4 Smart Mobility Procedure model – sound check phase – detailing

One further measurement of successfully launched initiatives is the willingness of organizations to not only test innovative offerings in a field trial, but institutionalize them within their organizational boundaries and beyond in the contextual ecosystem.

The *Initiation Phase* is illustrated in Fig. 13.5.

Checklist to Prepare Smart Mobility Projects The overall starting point for Smart Mobility projects is the agreement of the to-be-tested use case(s). Once the selection has been made, the action items as listed in Table 13.2 take place. Those assure the development of a common understanding on key parameters, the evolvment and ultimately the sign-off of a jointly agreed decision paper to initiate the project, starting it and tracking each of the corresponding statuses and to dos.

Change Management – Preparatory Steps for Organizations and Ecosystems Targeting a high probability of successfully deployed innovation in organizations and ecosystems can be measured by a number of parameters. The following elaboration and suggestions are the result of a longitudinal study and cross-regional and cross-industry assessment [66].

We distinguish two fundamental evaluation streams. Firstly, the organizational capability to cope with innovation and its operational impact. Secondly, the capability of an

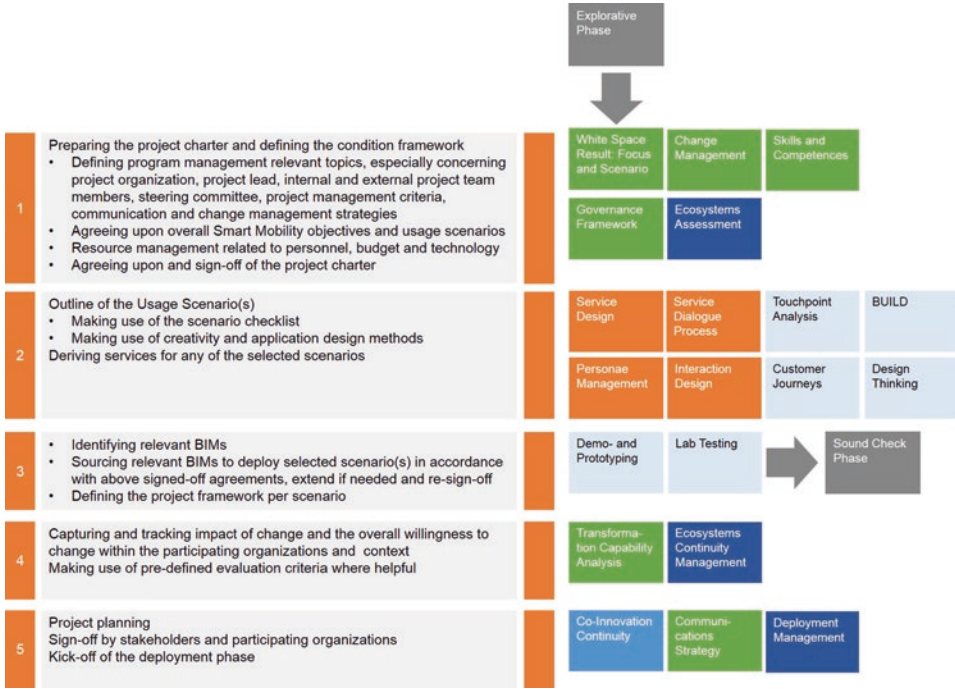


Fig. 13.5 Smart Mobility Procedure model – initiation phase and kick-off

innovation to connect ecosystem participants and members. The organizational evaluation criteria that have been observed throughout a series of projects are outlined in Table 13.3. The table serves as a working tool for project teams to track the status of their very own Smart Mobility projects.

The ecosystem wide connectedness is measured by the criteria outlined in Table 13.4:

Table 13.2 Checklist for preparing a use case related to Smart Mobility projects

ID	Checkpoints	Status ^a
1	Use case based project initiation	
1.1	Use case description	
1.2	Description of the addressable/to be addressed ecosystem(s) following the Smart Mobility program management activities	
1.3	Description of the value network following the Smart Mobility program management activities	
1.4	With regard to Smart Services, relevant BIM Which BIM are being applied?	
1.5	With regard to Smart Data, relevant BIM Which BIM are being applied?	

Table 13.2 (continued)

ID	Checkpoints	Status ^a
1.6	With regard to Smart Products, relevant BIM Which BIM are being applied?	
1.7	With regard to Smart Spaces, relevant BIM Which BIM are being applied?	
2	Business modeling with regard to Smart Mobility program management activities	
2.1	Elaboration of the Value Proposition Which benefits are achievable for customers by using the offered Smart Mobility solutions? How is the customer being supported to pursue his own duties?	
2.2	Addressability and characteristic of the targeted personae Which personae are being identified as Smart Mobility customers? Throughout the conduct of a personae driven analysis to which degree does the previously conducted value proposition assessment change? Does it require adjustments and if so, which ones? What kind of relationship is required and from whom, to offer Smart Mobility to the above identified personae? What kinds of relationships towards further personae are required to reach out to the original identified personae and customers?	
2.3	Checkpoint on benefits and usage effects based on the personae related assessment Will the value proposition differ for individual user(s) and user groups? To what extent does it differ? Are distinct effects on usage expected based on the personae driven assessment? If so, which ones? What are the quantitative and qualitative advantages of the targeted service?	
2.4	Service deployment Sketching of revenue streams, initial and recurring costs in addition to pre-investments and financial efforts for project funding	
2.5	Sketching of quantitative and qualitative value streams Which trends are known and not yet known? How will/could markets emerge based on the targeted deployment scenario?	
2.6	Trends and market development Who is the service provider of which of the BIM? What are the condition frameworks for test, usage, and deployment of the BIM? What other kind of research initiatives take place next to Smart Mobility? Is there an opportunity to combine research initiatives with your own undertaking? Where and how can you and others benefit? Which contributions are being expected from you and others?	

Table 13.2 (continued)

ID	Checkpoints	Status ^a
2.7	<p>Legal aspects</p> <p>What kind of legal aspects need to be considered in the area of data security and data privacy, cloud computing, cyber security, liability, and usage rights amongst others?</p>	
2.8	<p>Societal aspects</p> <p>Which impact does Smart Mobility have on the society and the population in the observed context?</p> <p>Impact areas related to human-machine interaction, competence building and enrichment, further focus on establishing knowledge workers and hiring data scientists that focus on ecosystem related analytics and data-as-a-service offerings</p>	

^a Status management and updates are part of the project's preparatory, conduct, and post-deployment phases.

Table 13.3 Organizational change management capability

Evaluation	Evaluation criteria in detail	Evaluation result ^a
Checkpoint on organizational footprint	<p>Description of company profile: organizational structure and legal entity characteristics (public authority, private business, research institution, other), size, strategic pillars and business segments, targeted reach such as geographies, markets, consumer and business segments, vision and mission statements, competency profile, competition</p> <p>Description of strategic positioning</p> <p>Transformation capability related measurements are in place</p> <p>Description of the decision making process within the organization</p> <p>Hierarchical <i>embeddedness</i> of strategic projects</p> <p>Handling of change management processes in the past</p> <p>Listing successfully deployed change management and/or innovation initiatives in the past 5 years</p>	

Table 13.3 (continued)

Evaluation	Evaluation criteria in detail	Evaluation result ^a
Measuring an organization's willingness to innovate	Evaluation takes place along the following measures: <ul style="list-style-type: none"> – Innovation may exceed expectations of original ideas and scope – Innovation follows an organization's system of values – Innovation is driven by the requirements of future consumers and/or users – Highly complex innovation with regard to understandability, traceability, and the ability to be replicated – Innovation leads to band wagon effect in other organizations – Innovation is perceived as technological novelty – Innovation is testable prior to deployment – Other participants and user groups are given the opportunity to replicate the innovation 	
Degree of influencing the workforce	Evaluation takes place along the following measures: <ul style="list-style-type: none"> – Positive effect of innovation – Innovation is being accepted hesitantly – Innovation is being rejected – Motives for degree of acceptance are captured along socio-cultural, demographic, and other factors 	
Innovation related sourcing process	Sourcing process is being measured by: <ul style="list-style-type: none"> – Criteria that influence the sourcing of the innovation and/or sourcing of innovation critical components and assets as outlined in the <i>BIM catalogue</i> – Identifying the degree of an organization's dependency on the innovation – With regard to the perceived value that is being generated by the innovation for the organization – With regard to securing the competitive advantage of an organization – With regard to securing the future position of an organization in the active and planned ecosystems 	

^a The evaluation and the evaluation results are part of the project's preparatory, conduct, and post-deployment phases.

Table 13.4 Ecosystem dependent change management capability of an organization

Evaluation	Evaluation criteria in detail	Evaluation result ^a
Degree of institutional linkage	<p>Assessing the legal and political condition framework of an organization in the observed ecosystem</p> <p>Degree of dependency of an organization on institutional elements of those geographies that are subject to the organizational footprint (e.g. country, community, city, and further ecosystems)</p>	
Economic contribution of the organizational innovation	<p>Organizational contribution and influence on economic and socio-cultural involvement of those geographies that are subject to the organizational footprint (e.g. country, community, city, and further ecosystems)</p> <p>Note: a high degree is accelerating the acceptance of the organizational innovation at state and local governmental institutions and administrations</p> <p>Preparatory steps to predict relevant measures such as cost-benefit analysis, return on investment ratio and further economic and ecosystem relevant key performance indicators</p> <p>Degree of practicability to apply the perceived innovation in the public sector</p> <p>Identifying adjustment needs and potential of the perceived innovation to foster the acceptance</p>	
Degree of connectivity among the participating members of an ecosystem	<p>Conduct of a connectivity analysis</p> <p>Identifying the degree of connectivity dependent on observed and targeted personae</p>	
Contributing to informal networks and initiatives	<p>Interrelationships of organizations in ecosystem related informal networks fostered by the organization's Corporate Social Responsibility (CSR) program and local activities with respect to research, education, and social welfare</p>	

^a The evaluation and the evaluation results are part of the project's preparatory, conduct, and post-deployment phases.

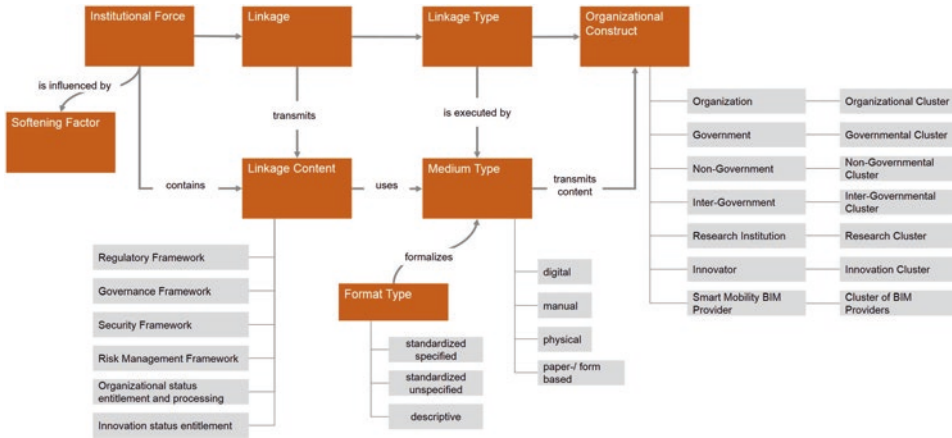


Fig. 13.6 Procedural steps to facilitate compliance checks in and among organizational constructs

Introducing a Procedural Model to Facilitate Compliance Checks Within and Among Organizational Constructs The following model has been elaborated to explore the *embeddness* of IT standards in European Union directives and to foster the transition of embedded IT standards in the dedicated legal frameworks for each of the EU member states [66]. The model aims to ease the depiction of dependency factors when a huge number of participants comes into play in a legal environment such as the European Union. The schema in Fig. 13.6 shows the basic model. The assessment of the participants followed the connectedness analysis as outlined previously. A detailed elaboration took place for each of the participants. The detailing of the schema has been conducted in close alignment with the participants and is depicted in Fig. 13.7.

13.4 Fitness Check

Trainers that regularly subject athletes to a fitness check are similar to the individual judging a *Fitness Check*. Checks are based on common, conventional, and recommended measures from physicians and subject matter experts. Moreover athletes rank themselves and get ranked following a set of local, regional, and global standards. Further criteria depend on the form of sport and the athlete’s profile. Common questions are covered such as asking for how long the athlete is active in that sport, his exercise program, and his routines when doing sports. Further checkpoints are about the goal plan and individual objectives that might not have been considered in the current plan.

Conducting a fitness check for an entire ecosystem is much more complex. A search on key terms such as mobility, urban mobility, intermodal traffic management, and others results in a large number of parameters that might be applicable for a *Fitness Check*. Not all of the parameters are comparable or useful in an ecosystem wide context. Furthermore,

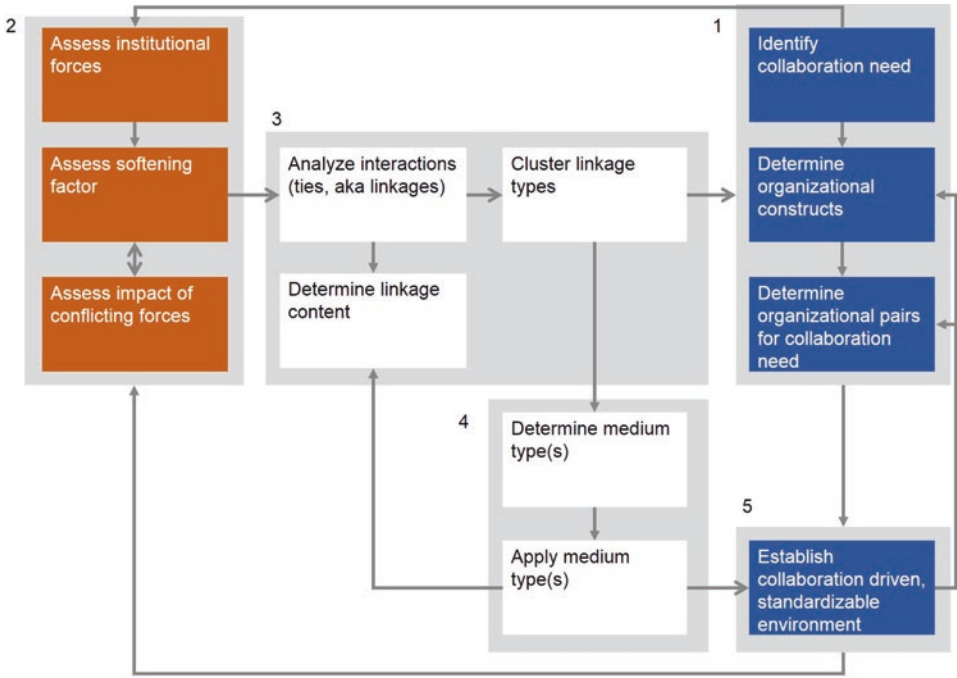


Fig. 13.7 Investigating the impact of innovation on jurisdiction

even the key terms are applied differently and are not clearly defined. With respect to metrics, those are subject to a number of distinct resorts, distinct media, and are often maintained separated from each other. Even more, once maintained the digital media differ in scope, quality, and actuality. Therefore it turns out to be a tedious effort to transfer the figures from separate systems, align, and adjust them in a semantic unique manner to derive one comprehensive mobility metrics foundation. The metrics we introduced in Part II promote a method to conduct a location, yet ecosystem embracing, KPI management. Big data tools and modern diagnosis methods lead these efforts.

Overall there is a lack of consideration of the local status quo of urbanizations and ecosystems: the *habitat's profile*. A location's key elements such as those depicted in Fig. 13.8 are of great help. The habitat's profile presented here is applicable to any location that considers Smart Mobility.

Once these elements are assessed among the group of stakeholders and Smart Mobility initiators, the first relevant step is made! What follows is an agreement about the criteria that serve as the basis of comparison. That agreement is made between the stakeholders and drivers of the project. It is recommended you identify comparable ecosystems and mobility relevant environments (see Sect. 13.6). The shortlist is a result of mapping the ecosystem's profile against others. It is also useful to look at the ecosystem's ranking in the local and national indices. Concerning urban settlements, one approach is taken by the



Fig. 13.8 Smart Mobility Procedure model – a habitat’s profile

Smart Cities index in the USA, another one by the so-called Zukunftsatlas (Future Map) in Germany that compares cities, even villages, and regions along smart city related segments such as Smart Mobility, Smart Environment, and others [151].

Overall a mapping of one ecosystem to others should be conducted based on population, reachability in the hinterland, and events. Events are a good characteristic for Smart Mobility to assess the quality of mobility functioning in cases of peak usage of means of transport in relation to predicted and unforeseen travel. Thus mobility related measures include the profiles of previous attendees, the size of the event and its overall profile, the price range of the tickets, and the mobility related habits with respect to arrival and departure retrieved from previous events. In a Smart Mobility and *one ticketing* environment, the business traveler, for example, is being guided towards an interesting event, receiving the registry invitation pre-prepared, and a mobility and lodging inclusive offering through the *Digital Concierge*. Event organizers can count on achieving a higher number of attendees without engaging themselves in direct sales efforts. Hospitality providers will benefit from better occupancy rates through short-term bookings. The same accounts for hospitality service providers as well as further kinds of event adjacent services in the field of tourism.

All other actions that are part of the *Smart Mobility Fitness Check* are outlined in Fig. 13.9.

The fitness check is also a good instrument to assess the before/after situation with respect to the mobility project (see Fig. 13.10). The assessment compares as-is with regard to the optimal transport operations. As baseline serves the mobility service portfolio that has been agreed upon in the strategic alignment process and the identified roles and responsibilities (see Sect. 13.1). The real challenge is the definition of the ideal mix

1	<p>Foundation work: elaborating the basic framework</p> <ul style="list-style-type: none"> • Describing the objectives and motivation • Capturing own location profile under applying the location profile template • Making use of results of the Explorative Phase or add insights from other innovation projects that are in progress • Sharpening the location profile and sign-off by stakeholders 	
2	<p>Agreeing upon habitat's profiles that are being used to be compared with and defining the criteria to conduct a comparison of own location with other location profiles</p> <ul style="list-style-type: none"> • Comparable locations could derive from partner cities, habitats that have an alike location profile or ecosystems that encounter a similar Smart Mobility ecosystem • Defining proof points to decide upon the comparison criteria: <ul style="list-style-type: none"> • Availability and insights into comparable data of the other ecosystem(s) and their personae structure • Conduct of selected customer journey interviews, facilitated by service dialogue processes • Conduct of selected touchpoint analysis with respect to mobility service bookings • Focus on endangered or risk areas and spaces • Focusing on services, data, products, or spaces or a combination of them 	
3	<p>Conducting the comparison(s)</p> <ul style="list-style-type: none"> • One-by-One comparison aka with each of the selected habitats or locations • Documenting apparent differences and synergetic effects by applying cause-and-effect as well as if-when analysis, dependencies based on past decisions or incidents (e.g. natural catastrophes, evacuation scenarios, others) 	
4	<p>Documenting comparative results Analysis and evaluation Agreement upon next steps Check back of the evaluation with the original motivation to conduct the comparison Signing-off the action items and decide upon continuation and necessary next steps</p>	

Fig. 13.9 Smart Mobility Procedure model – fitness check I

of public, private, and shared-economy driven mobility service offerings. The *IoS Role model* and the connectedness analysis are the ideal set-up to derive the ideal mobility mix on the one hand and explore further alternatives in a creative conceptual space on the other.

Furthermore, stakeholders should not hesitate to explore those alternatives by inviting representatives from other ecosystems that have been identified as role models and/or comparable ecosystems. The alignment with Smart Mobility project teams and mobility managers is useful to exchange knowledge and align or even conduct Smart Mobility field trials jointly. A continuous knowledge transfer facilitates even more the build and extension of skills and competences driven by a collaboration-based set-up.

13.5 Market Access Check

Looking into the emerging number of innovation triggered market entries, conducting a *Market Access Check* has become increasingly popular in recent years. An entire section in [Chap. 15](#) is dedicated to the trends in innovation management.

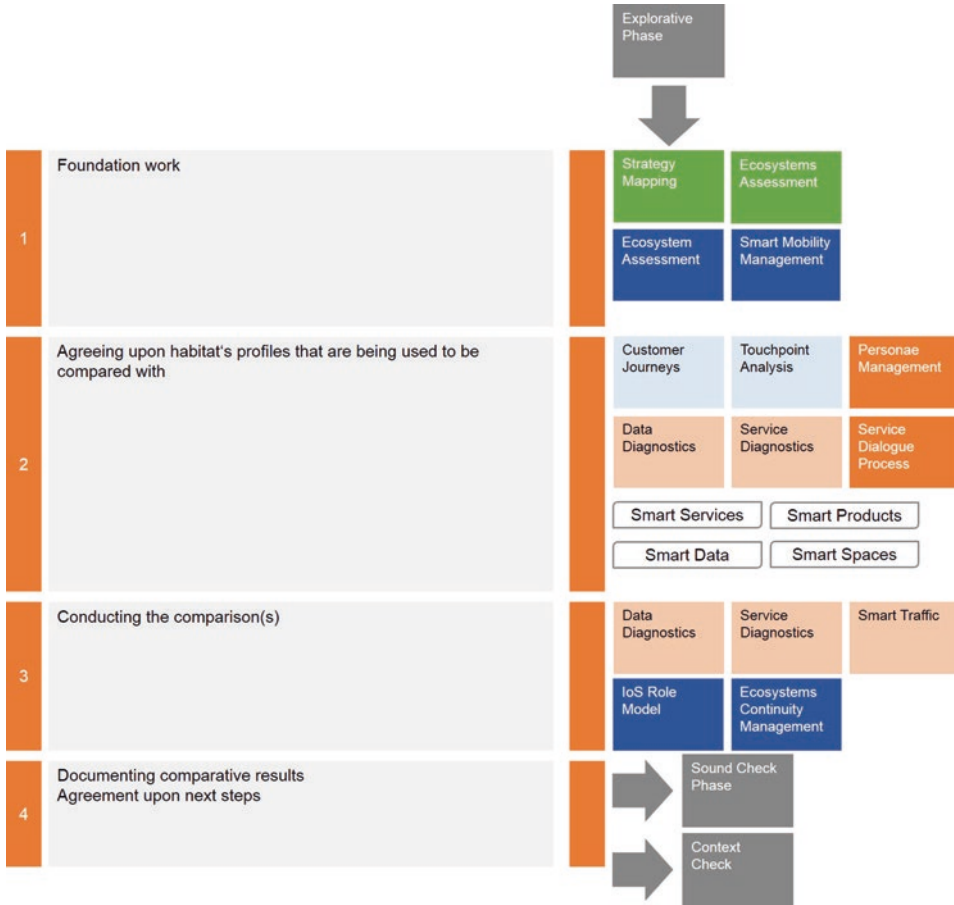


Fig. 13.10 Smart Mobility Procedure model – fitness check II

Innovators and entrepreneurs pitch their offerings in competitions, hackathons, and workshops issued, for example, by financial investors. The issuing entities are not necessarily only companies and private institutions. It has been observed that the public sector through local government itself, associated interest groups, and research institutes triggers innovation projects. Likewise, the innovators and entrepreneurs gain access to potential customers and have the ability to interact directly and countercheck the projected market acceptance.

It has never been made so easy and low cost to get access to test communities. Compared to market studies and consumer tests conducted by institutional providers, the hackathons and pitches provide a perfect field of opportunities next to access to testers: checking the viability against the competition, comparing your own approach with others, and even more relevant turning the participation into a social selling opportunity and getting

access to former pioneers that are now joining advisory boards and acting as business angels and mentors. On the other hand, the industry leaders and stakeholders in public and private entities benefit from a collaborative, co-innovation flavored setting that eases the engagement of constituents.

The conduct of a market access check is outlined in Fig. 13.11.

To identify in which area and direction the considered innovation is heading, it is recommended you apply the *BIM* structure (see Fig. 13.12) and watch out for functional or technical closeness of other offerings. The BIM Catalogue serves as a checkpoint to consider add-on elements or look for useful tools and methods.

The conduct of market access checks is driven by viability tests. *Viability* is one of the key elements of the design thinking method. Here viability relates to usability of an innovation or solution or service. Usability is twofold and targets the economic benefit and the consumer oriented benefit. The more refined the detailing of the to-be-tested offering, the more market driven and realistic are the outcomes of the test.

In an ideal setting the first prototypes are introduced to a test group. Prior to the test, the test organizers define the usability requirements and the test cases. The nature of use cases is subject to the scope of the planned offering. In any case it should embrace design, touch points and omni-channel deployment modes. The test results then are a critical source



Fig. 13.11 Smart Mobility Procedure model – market access check I

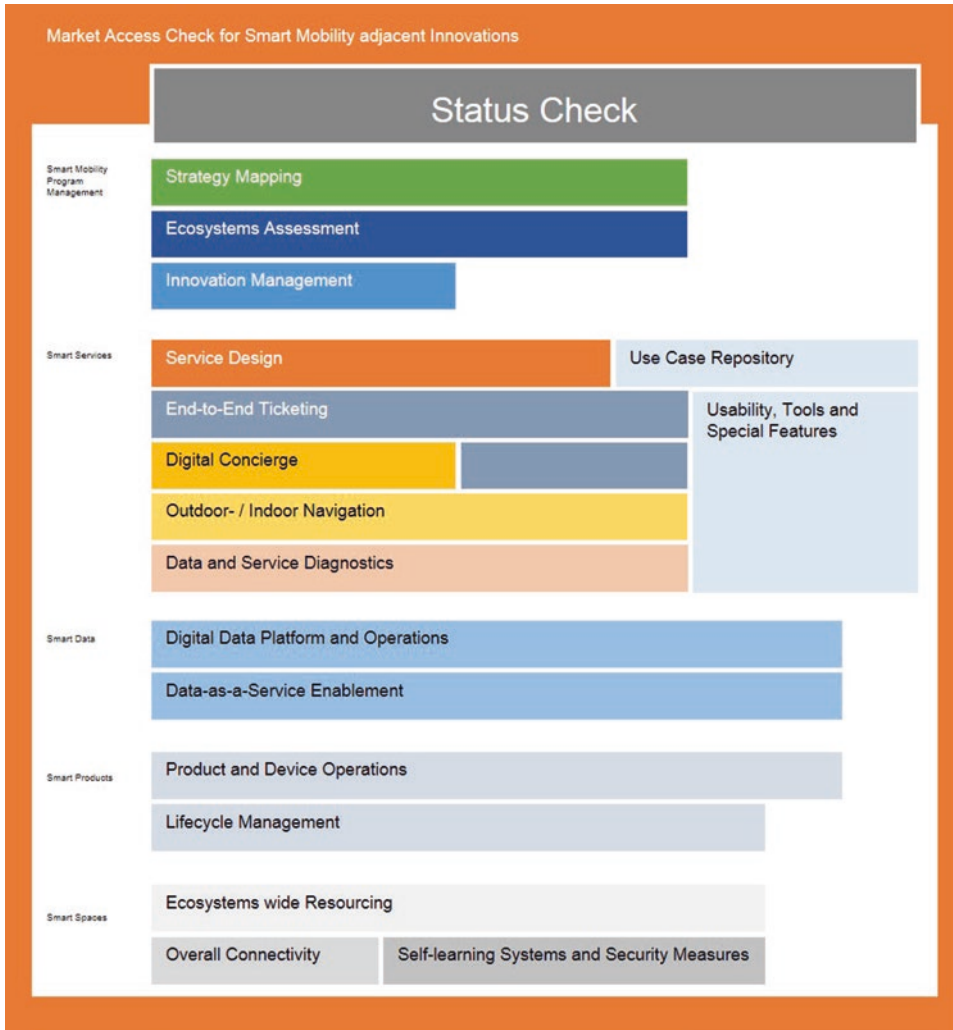


Fig. 13.12 Smart Mobility Procedure model – market access check II

of information for the development and design team and lead to a further iteration of the development and design. In the next test cycle, personae and targeted user groups are introduced to the offering.

Business model testing is conducted by inviting further experts. They are being asked to assess the identified business model(s) and economic conditions, outline pitfalls, and advise on the go to market and market expansion. More often experts are being invited that are subject novices and come from distinct industries and contexts.

Once the test cycles have been conducted to a satisfactory degree, evolving and refining the solution further, the first larger investments approach. With respect to fixed costs, those

account for workforce and production efforts. It is no surprise that the first changes take place in the start-up management. Shifts in functions and roles are driven by upcoming communication and business development needs. To prepare a market access check it might be worthwhile to take a look at one of the largest facilitators for product build and testing: the so called *Komponentenportal* of Romy Campe [152]. It was founded in 2012, motivated by the book of Prof. Faltn [153]. To date it offers more than 70 software components and tools.

13.6 Context Check

Subject to the *Context Check* is a comparison of your own ecosystem with other ecosystems. An own ecosystem refers to the ecosystem in which the initiator of a Smart Mobility offering is active, leading, and/or governing. The initiator might be a public sector entity, a *Chief Digital Officer* or the Mayor himself. The assessment starts with the profiling of your own ecosystem. The relevant action items are illustrated in Fig. 13.13.

The checklist in Table 13.5 focuses on the conduct of the analysis of the connectedness and the resulting comparison parameters. Based on the chosen scenario and use case, the detailing of the connectedness proceeds.

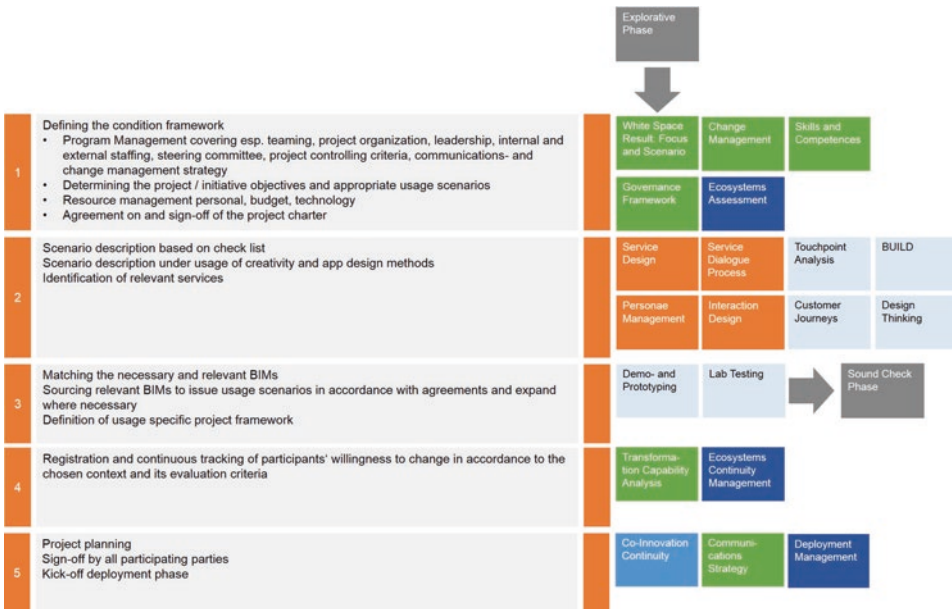


Fig. 13.13 Smart Mobility Procedure model – context check

Table 13.5 Checklist for the conduct of an analysis of connectedness

ID	Checkpoints	Further tools and methods
1	<p>Setting the stage: when you think about the motive to issue a Smart Mobility project, you already consider or have considered a certain context, for example, city center logistics, migration to autonomous parking in the city surroundings, or diminishing the congestion in the early working hours.</p> <p>So, what does your current business network look like?</p>	Smart Mobility Ecosystem
1.1	<p>Please determine your business partners as well as customer and supplier relationships with your organization and amongst each other.</p> <p>Business partners are defined as customers, suppliers, entities that you are collaborating with, adjacent business and government institutions, service providers that act to date independently from your company focus, and organizations that are mission critical to run a business or authority.</p>	Smart Mobility Ecosystem Personae-driven analysis
1.2	Visualize your business network.	Smart Mobility Ecosystem
1.3	<p>Checkpoint: is it necessary to add further user groups?</p> <p>Please identify and list these user groups and describe the interactions they might or will have within your network.</p>	Personae-driven analysis
1.4	Which of the identified personae are addressable by what kind of services?	Interaction Design
1.5	Conduct an overview of the service provider, service consumers, and further clusters of participants.	IoS Role model
1.5.1	Please mark in your business network layout resulting from 1.2 and 1.3 the service related business partners as well as the interactions they have within the network.	
1.5.2	Which network participants are mostly relevant for service sales?	
1.5.3	Which network participants are mostly relevant for service development?	
2	Do you have first cross-organizational process flows in the form of sketches and documents, and that depict the process of service sourcing up to the point of digital and/or physical service delivery and deployment?	Service Design
3	Which skills and competences are being expected from you and your business partners to sustain in-services trade?	BIM Smart Mobility Program management

Table 13.5 (continued)

ID	Checkpoints	Further tools and methods
4	<p>Now, choose another context – a context you might have prioritized lower than the above one or a context that you scoped out because of certain conditions you considered complex!</p> <p>Another way of finding another context are partner cities, cities that are comparable with yours or the city you operate in, based for example on comparable size and number of inhabitants, based on a high degree of innovation empowerment, or based on recently launched Smart Mobility initiatives.</p>	
4.1	<p>Similar to the sound check phase, conduct a comparison of your and their BIM. It is recommended you follow the structure of the BIM catalogue.</p>	Sound check phase
4.2	<p>Do you encounter alike initiatives in the identified ecosystems that are suitable for yours? Which are the key differences to your initiative? What are the key drivers and benefits of the other initiatives?</p>	Sound check phase
4.3	<p>With regard to KPIs, the most burning drivers and improvement areas you find in your very own context: based on your context what are the top 10 KPIs you like to focus on?</p>	Mobility Diagnostics
4.4	<p>Based on the outcomes of the action items from 4.1 to 4.3 you will now be able to conduct the Explorative Phase in a much more focused manner and aligned with your needs.</p>	Explorative phase

The connectedness analysis and the supplemental tools and methods evolved through more than 200+ projects and contexts. Both of them will give credit back to the project teams as they allow an integrated view of personae and services.