

Mission-oriented ecosystem formation

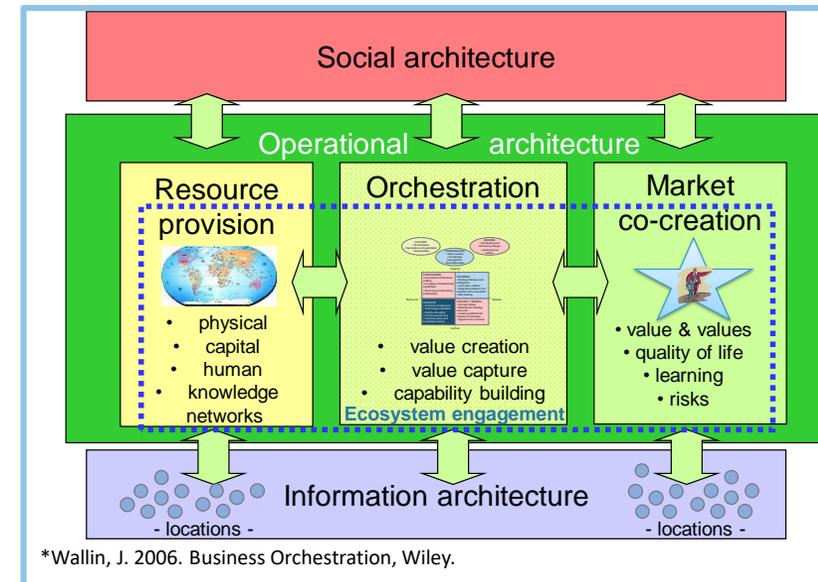
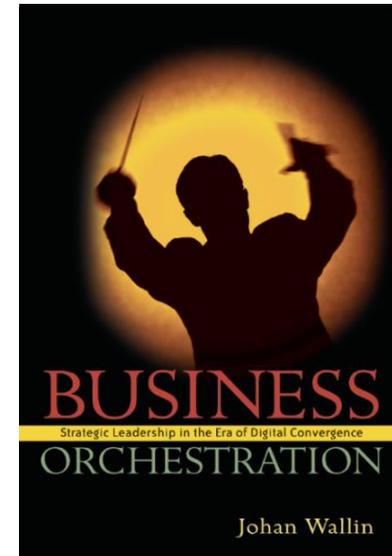
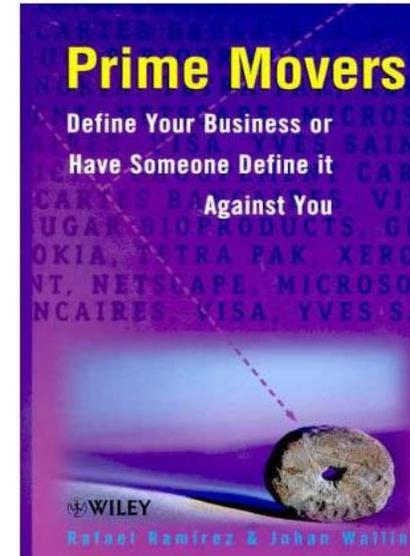
June 9, 2018

Dr. Johan Wallin, managing partner
Synocus Group



About Synocus

- Synocus is specializing in ecosystem orchestration based on the research by Johan Wallin published in the books Prime Movers (2000, with Rafael Ramírez), and Business Orchestration (2006).
- The orchestration concepts have been refined in collaboration with leading academics such as Richard Normann (ex-colleague), Rafael Ramírez (Oxford University), Tomi Laamanen (University of St. Gallen), Takahiro Fujimoto (University of Tokyo), Feiyu Kang (Tsinghua University), David Teece (UC Berkeley), and Christos Pitelis (University of Cambridge).
- The ecosystem initiatives provide the basis for Synocus' growth and internationalization.
- Synocus has been recognized by the Finnish government as the forerunner in ecosystem orchestration; three ecosystems are financially supported by Business Finland.
- To enable ecosystem orchestration Synocus has developed its own concepts for offering development and capability building.



Mariana Mazzucato: Mission-Oriented Research and Innovation in the EU

- I look at what we can learn from the missions of the past — like the Apollo Program — and how to apply those lessons to the complex challenges of today.
- Mission-oriented policies can be defined as systemic public policies that draw on frontier knowledge to attain specific goals or “big science deployed to meet big problems”.
- Missions are primarily a way to orchestrate the rich diversity of talent and expertise.
- A mission is not a single project, but a portfolio of actions that can encourage multiple solutions.
- Ambitious missions that have the potential to have wide societal impact will need a combination of both development of technologies and drive a systemic change.
- A key lesson is that missions must be bold, activating innovation across sectors, across actors and across disciplines. They must also enable bottom-up solutions and experimentation.



(source: Mazzucato, 2018, Mission-Oriented Research & Innovation in the European Union, p. 2

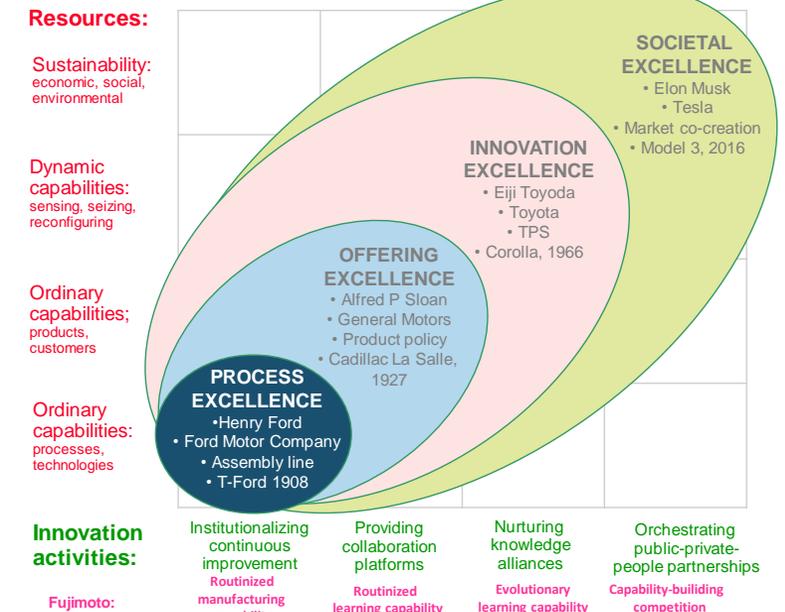
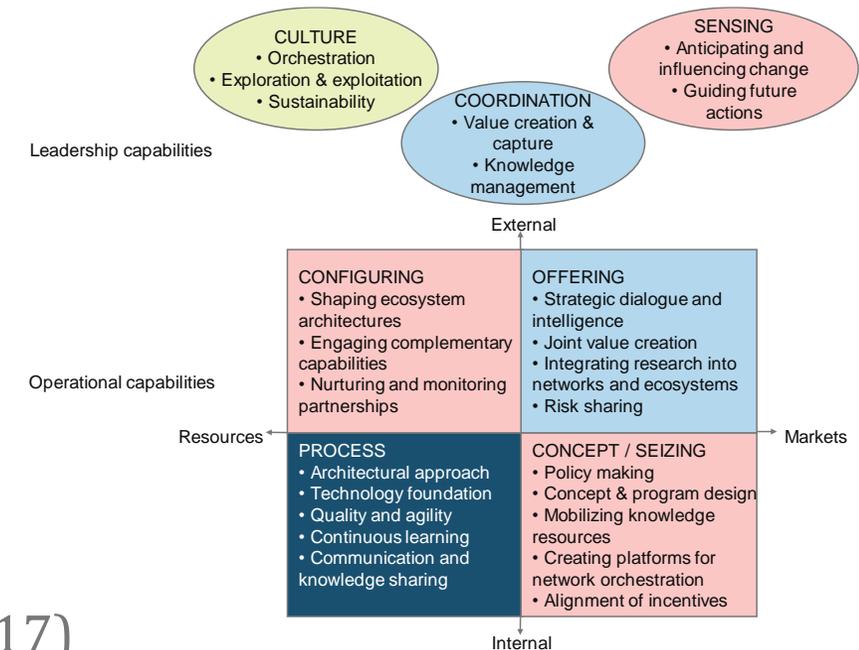
Literature review

Capability building

- Normann (1985); *strategic action capability*
- Teece, Pisano, Shuen (1997); *dynamic capabilities*
- Fujimoto (1999); *capability-building competition*
- Wallin (2000); *capability map*

Excellence Framework (Wallin, Laxell, Fagerberg, Fujimoto, 2017)

- The inside-out view on capabilities is described on the vertical axis and the outside-in view on the horizontal axis (see figure)
- Four categories of excellence
 - Process Excellence
 - Offering Excellence
 - Innovation Excellence
 - Societal Excellence



Samples: Business Finland sponsored ecosystem initiatives

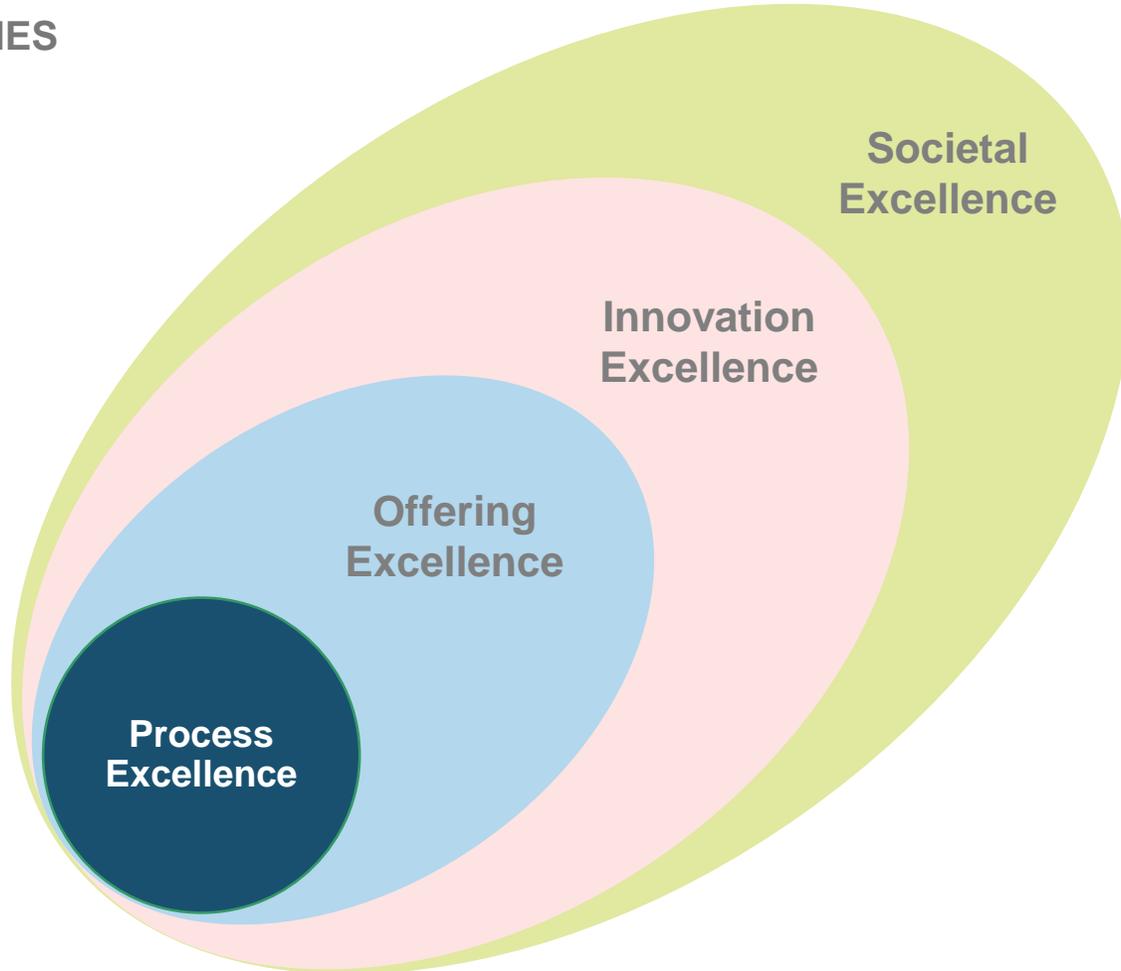
CAPABILITIES

Prevailing capabilities

Dynamic capabilities

Offering and coordination capabilities

Producing capabilities



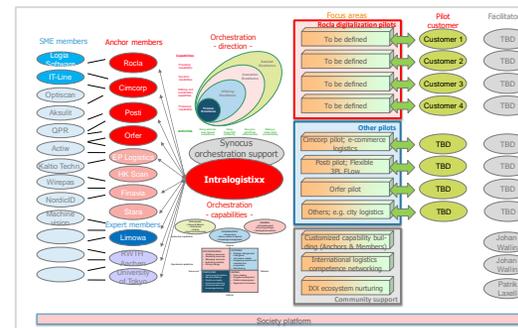
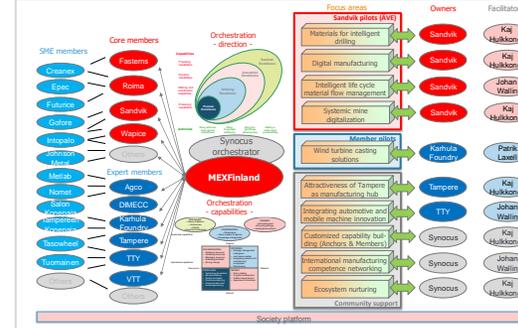
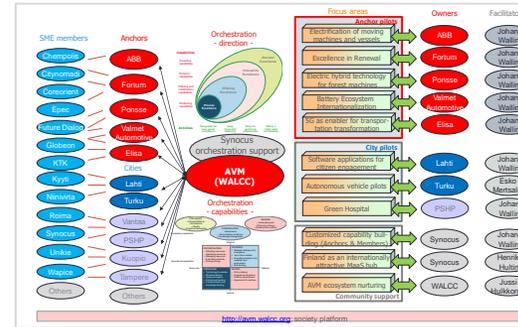
ACTIVITIES

Doing what has been agreed (compliance)

Doing things right (efficiency)

Doing the right things (effectiveness)

Making a better world (sustainability)



Autonomous Vehicles and Mobility Services (AVM)

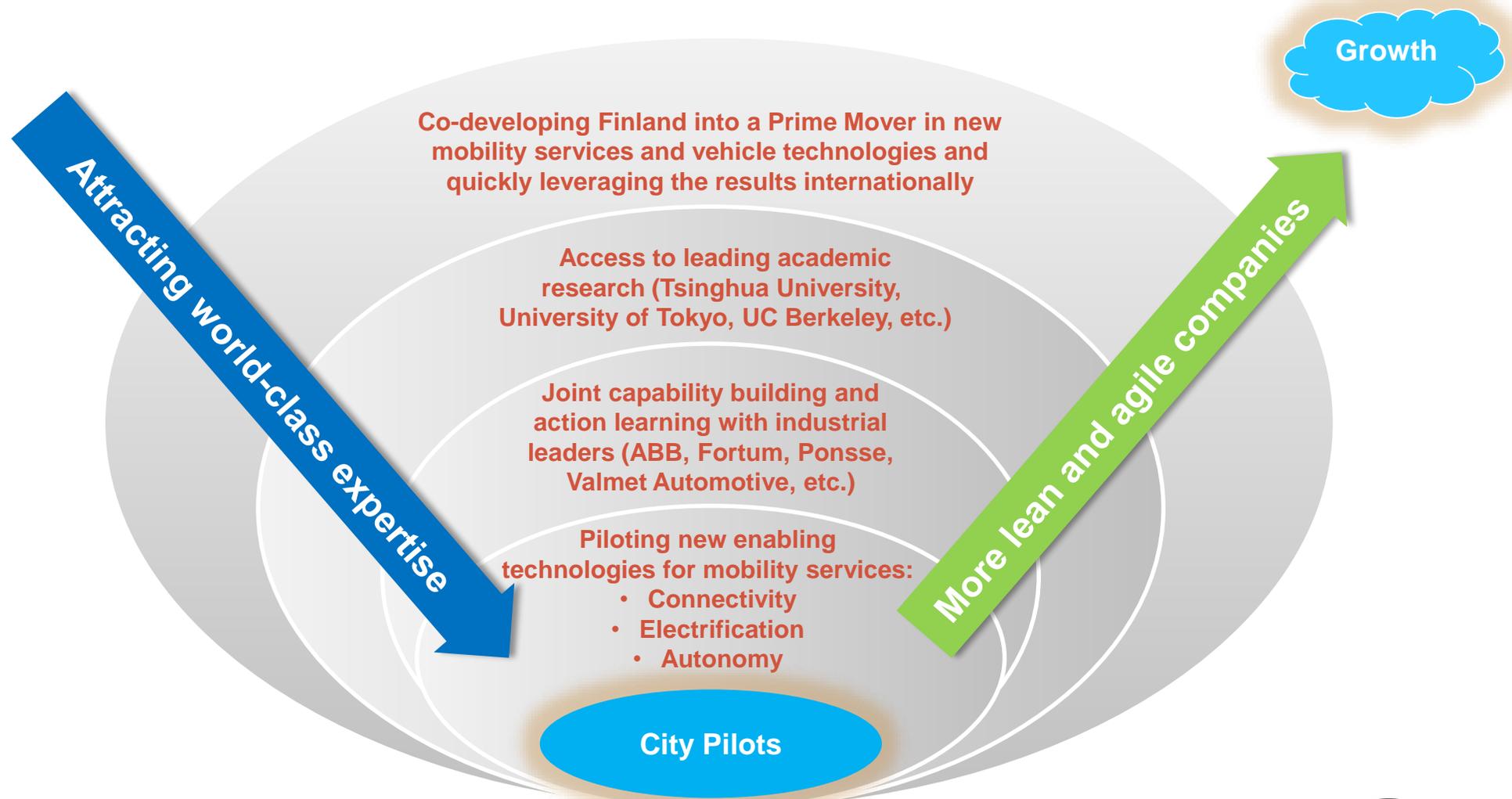
Manufacturing Excellence Finland (MEX Finland)

Intralogistix

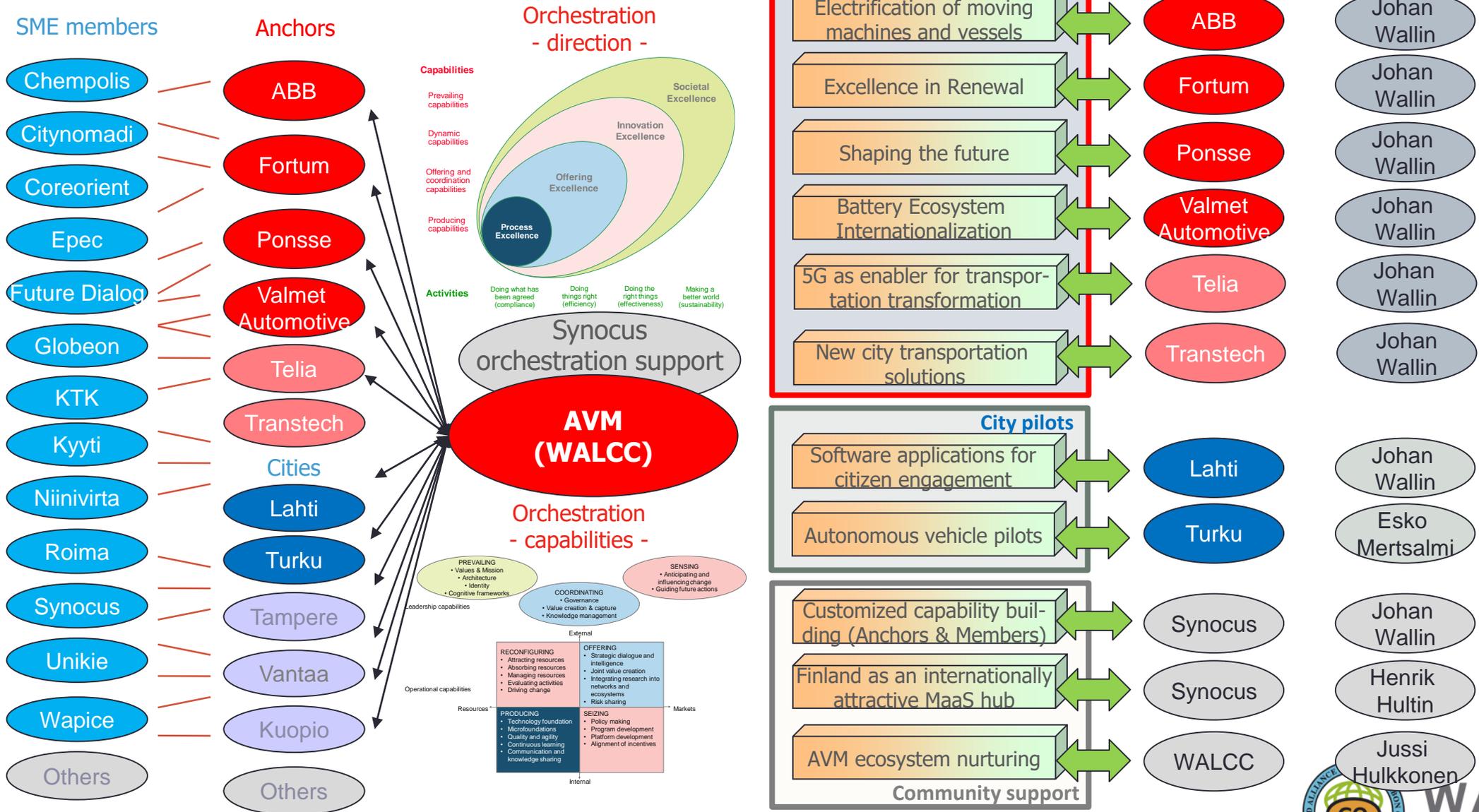
Original ecosystem plans, August 2017

AVM	MEX Finland	Intralogistixx
<p>Based on findings from the interviews, we see the development of mobility services as a two-pronged process. On one hand, there are several technologies (e.g. 5G, electrification, autonomous driving) that must be in place for mobility services to radically transform the field of transport. On the other hand, mobility services will call for new types of business models, often with a strong integration between public and private service providers.</p>	<p>Based on the above conclusions from the in-depth interviews the ecosystem development project will be focusing on eight work packages: (i) Tampere Material Technology Competence Center, (ii) New machining methods, (iii) Integrated design, manufacturing and product life cycle management, (iv) Spearhead offering development and piloting, (v) Tampere as digital manufacturing excellence center, (vi) Tampere as a smart manufacturing workplace, (vii) Ecosystem capability building, and (viii) Program management.</p>	<p>Based on in-depth interviews customers and partners expressed some key expectations of a new ecosystem with an attached innovation platform. These expectations will in the ecosystem development project be addressed through eight work packages as follows: (i) Intralogistics intelligence, (ii) Offering co-creation and piloting, (iii) Ecosystem nurturing, (iv) Internationalization, (v) Community engagement, (vi) Customized capability building, (vii), Intralogistics platform maintenance and (viii) Program management.</p>
<p>By establishing the new innovation ecosystem, the WALCC expects Finland to emerge as a globally recognized competence center within the field of new forms of transportation. This will attract an increasing interest among other companies that will join the ecosystem, which, in turn, will increase investments and create new jobs in Finland. At the same time, the close collaboration between the WALCC and the anchor companies will ensure that new products, services, and solutions developed in Finland can rapidly be offered on the global market thanks to the international presence of the anchor companies.</p>	<p>By establishing the new ecosystem it is expected that Finland will emerge as a globally recognized competence center within the field of digital manufacturing. This will attract an increasing interest among other companies that will join the ecosystem, which in turn will increase investments and create new jobs in Finland. At the same time Sandvik can rapidly bring the new solutions developed in Finland to the global market. For companies joining the ecosystem we see that they will have a unique possibility to benefit from the spill-over effects that will be created thanks to the €18 million investment by Sandvik Corporation into the Tampere Rock Drills factory.</p>	<p>By establishing a semi-open innovation ecosystem Rocla expects that Finland will emerge as a globally recognized competence center within the field of intralogistics. This will attract an increasing interest among other companies that will join the ecosystem, which in turn will increase investments and create new jobs in Finland. At the same time Rocla as part of the Mitsubishi Nichiyu Forklift Group can rapidly bring the new solutions developed in Finland to the global market.</p>
<p>The initiative will develop an agenda which can, in the longer term, provide: (i) new offerings for different customer segments; e.g. equipment manufacturers, MaaS operators, AI providers, software providers, and users and (ii) address new customer transportation needs e.g. due to digitalization, robotization, electrification, and new business models.</p>	<p>The initiative will develop an agenda which in the longer term can provide: (i) new offerings for different customer segments, (ii) collective intelligence to more rapidly address new customer needs e.g. related to product technology, digitalization, robotization, service offerings, and business models, and (iii) new capabilities in the Tampere region (through spill-over effects), which can be leveraged upon also outside the new digital manufacturing ecosystem.</p>	<p>The initiative will develop an agenda which can in the longer term provide: (i) new offerings (and related roles for each actors) for different customer segments; e.g. equipment manufacturers, rental companies, AI-providers, ERP-providers and users, and (ii) address new customer needs e.g. customer intralogistics needs, digitalization, robotization, trucks and cranes functionalities, service models.</p>
<p>The participating companies will benefit from the pursuit towards the leading mobility authority in three ways: (i) enhanced brand recognition for participating organizations and resulting higher share of mind, (ii) new knowledge creation through broader understanding of the transition of transportation, and (iii) new business through pilots and demonstrations.</p>	<p>Sandvik and the ecosystem members will benefit from the development of excellence in digital manufacturing in three ways: (i) new knowledge creation through broader understanding of digital manufacturing and focused research initiatives, (ii) new business through pilots and demonstrations creating business growth and new jobs, and (iii) enhanced brand recognition and resulting higher share of mind due to high tech and digitalization expertise image.</p>	<p>Rocla and other participating companies will benefit from the pursuit towards the leading intralogistics authority in three ways: (i) enhanced brand recognition and resulting higher share of mind, (ii) new knowledge creation through broader understanding of intralogistics market and focused research initiatives, and new business through pilots and demonstrations.</p>

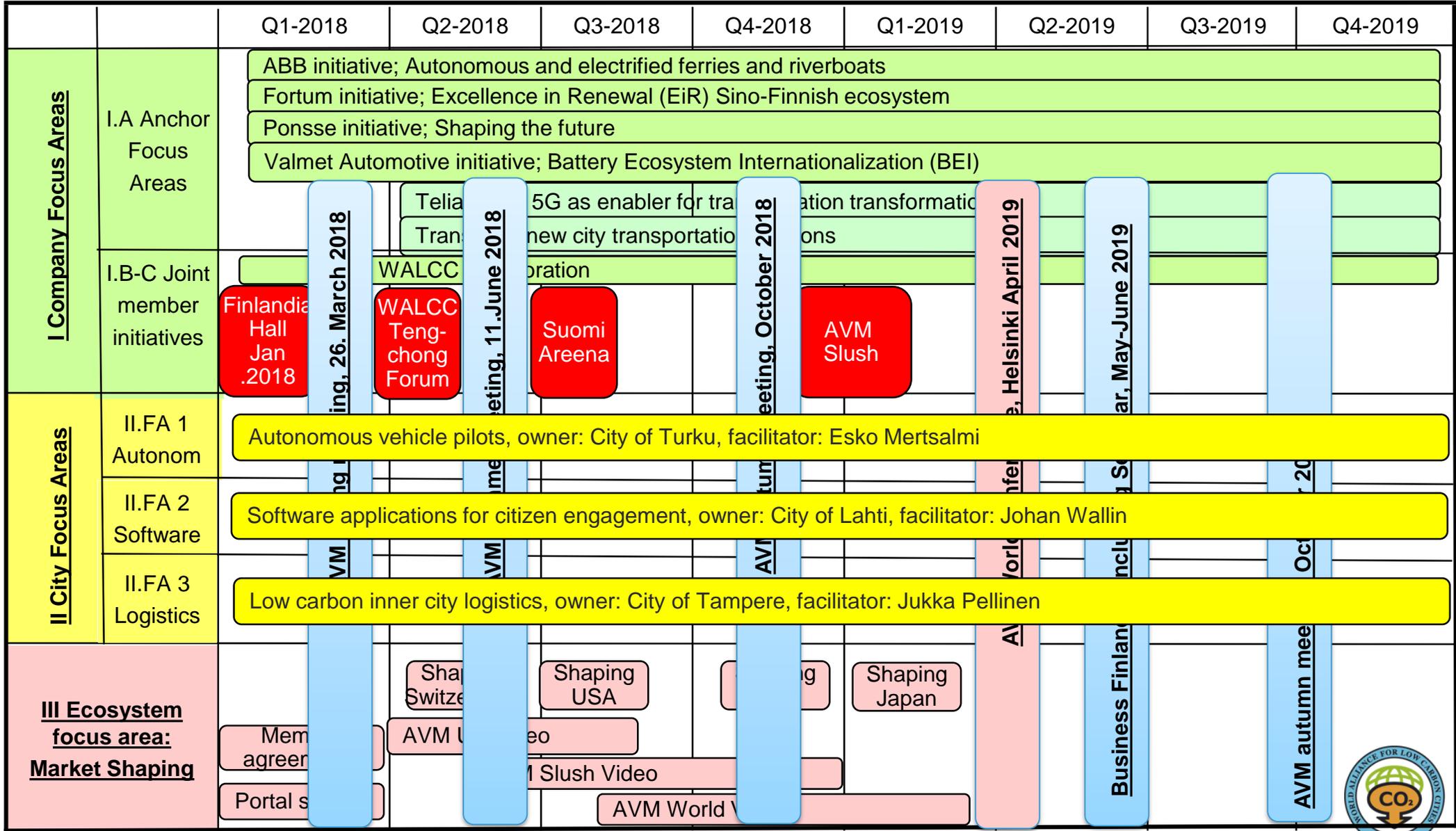
AVM – the mission



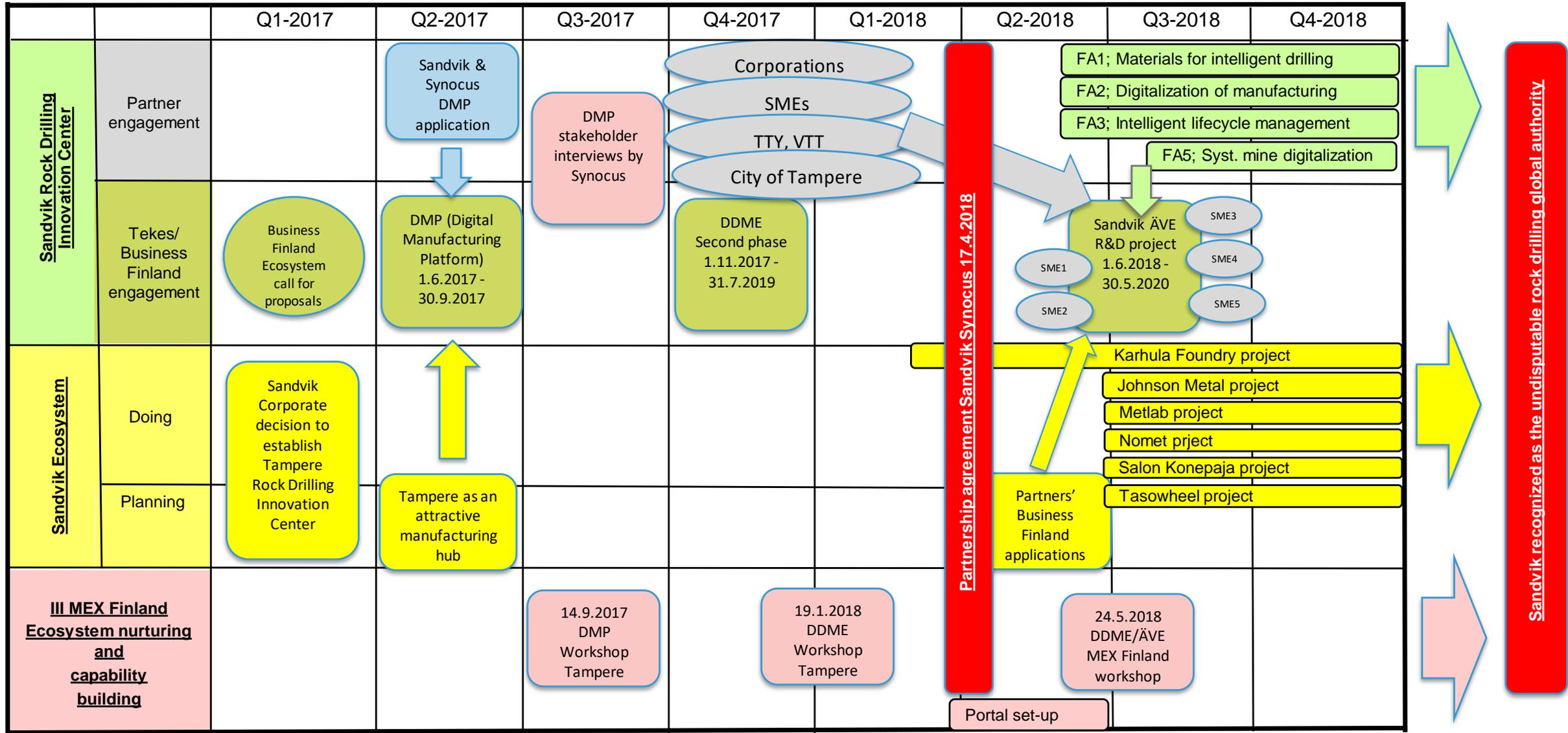
AVM ecosystem architecture, version 4.6.2018



AVM roadmap 2018-2019, version 4.6.2018



MEX Finland evolution



Preliminary findings

- The ecosystem formation process in all three cases have only continued for about a year, and subsequently it is too early to tell whether the capability-building efforts will be successful. The first year has been focusing on three main activities relating to the formation of the ecosystem:
 - Creating an attractive mission and roadmap for the ecosystem.
 - Engaging complementary ecosystem members in joint efforts to bring the ecosystem off the ground.
 - Supporting the joining members one by one with a first set of activities to secure that the ecosystem agenda would be aligned with the company-specific agenda of the member.
- The findings from the three initiatives indicate that
 - an ecosystem to be formed with government support will be originated in the formation of an ecosystem mission of societal excellence,
 - companies expect ecosystem participation to contribute to their offering development process but also strengthening their innovation capabilities, and
 - *reconfiguring internal and external competences to address rapidly changing environments* (Teece et al., 1997) remains the most difficult characteristic of dynamic capabilities