WTA / UNESCO Global Training Workshop, Daejeon 22.9.2015

Ilkka Kakko,
Founder and Partner,
Karostech Ltd, Finland
www.karostech.fi
www.respectserendipity.com

Kari Mikkelä
Executive Producer, Co-founder
Urban Mill Innovation Platform
www.urbanmill.org

"Platform Thinking within the Third Generation Science Park Concept"

ABSTRACT:

This paper will describe shortly a new STP concept called 3GSP (Third Generation Science Park), which is gaining momentum in Finland. It explains the fundamental changes in the global innovation environment and explains why the platform thinking is becoming an essential element in ecosystem development. The theoretical background and classifications of platforms are described and the benefits from the STP perspective highlighted. The paper emphasizes especially the role of so called 'competence platforms' and explains the main characteristics of a fully working competence platform. The role of competence platforms in understanding serendipity and as a fundamental factor in the team building is highlighted.

The paper analyses from STP perspective several practical elements, where platform thinking supports the emergence of new innovation environments, including Urban Mill (Finland) and Meetberlage (Netherlands). The requirements for comprehensive competence platform services are presented and their potential to support community building and therefore ecosystem development is illustrated.

This analysis will give the STP practitioners new models of applying the quadruple helix-principles and help in the co-creation, open innovation and serendipity management practises. The case studies, which are presented in the paper, will help the STP management teams to evaluate the benefits of platform thinking in different contexts.

The transformation of the Third Generation Science Park (3GSP) model

The 3GSP concept was developed in the context of netWork Oasis project in Joensuu Science Park, Finland few years ago. The author of this paper, **Ilkka Kakko**, was in charge of this development initiative, which is still known about some radical and disruptive elements introduced into the innovation environment design. Those elements were designed, piloted and tested in a real STP environment in Joensuu.

The main characteristics of a 3GSP concept were explained in a WTA/UNESCO Training Workshop 2013 article[1] and they consist of following elements:

- Focus on individuals and community building
- Pre-incubation – or network incubation as the 3GSP term goes – is strongly supported
- Ecosystem thinking
- Healthy balance between effectual entrepreneurship, start-ups, SMEs and established companies, also social entrepreneurship and virtual teams/organizations are supported
- Investments directed into advanced communication technology and community building – not necessary into the real estate and new infra
- Geographically dispersed locations – like having a node (coworking space) in downtown location – and main activities in the university campus area
- Workspace design – both physical and virtual collaboration platforms – supporting open innovation principles and community building
- Understanding the importance of "sticky knowledge" in regional development context
- Serendipity management methodologies widely used

The continuous transformation of our society and global innovation scheme has also changed the 3GSP concept. Just two years ago only an emergent platform thinking has become mainstream in many business areas today. The collaboration happens more and more on global level and thematic approaches have proved to be effective. This has lead to new alliances in many frontiers (capacity building, competence creation, networked businesses, new business models etc.) and generated a totally new economic model called "sharing economy". The transformation of business environment again has increasingly put pressure to the traditional STP model based on Triple Helix theory. The on-going development is really dramatic and happens very fast. This disruption has huge consequences at least in Finland where the traditional STP model (formerly run by Technopolis Plc) has totally disappeared in many major cities and has been re-placed by new entities, which are only loosely connected. The transformation is still looking for directions and new solutions and one concrete example of this development is the emergence of Espoo Innovation Garden.

Espoo Innovation Garden as a practical example of 3GSP concept

The rapid development of the Finnish innovation intermediary market has changed the structure of innovation environment over the last years. Technopolis Plc., which once was the dominant STP organization in Finland, revised its strategy few years ago and became a pure real estate company. It finished with all the publicly funded development projects and also outsourced incubation and acceleration programs to other organizations in the region. This of course caused turbulence in the market, but it also opened new opportunities for flexible and innovative solutions.

This development happened at the same time as the fundamental change in Finnish university structure. Three metropolitan area universities merged forming a new entity called Aalto University. With this reform three university disciplines, technology, business and arts, were combined: This merger has lead to a huge campus development program introduced last year. Otaniemi Campus area will in the years to come accommodate also those university campuses, which are still geographically dispersed throughout the Metropolitan area. The third fundamental change shaping the area is the extension of Helsinki metro system. Otaniemi Campus is from Autumn 2016 onwards fully connected to Helsinki downtown area with only a few minutes travel.

These changes have highlighted the importance of Otaniemi area as a regional and national innovation hub and driven the stakeholders into full collaboration in creating Espoo Innovation Garden as the main innovation hub in Northern Europe. It has very good chances to succeed in this endeavour because even at the moment it is inhabited by 44.000 citizens and the area hosts an almost equal

[1] https://www.academia.edu/5460411/WTA_paper_final_20_8 (download)

number of jobs, 16.000 of which are in ICT or ICT – intensive service sectors. 5.000 researchers and 16.000 students can also be found in the campus area, it accommodates hundreds of companies of which 200 are foreign and a mix of 110 nationalities lives and works in the area.[2]

The reason why Espoo Innovation Garden forms a perfect example of a 3GSP model is that it has re-placed the traditional STP organization with an emergent ecosystem. The transformation of the new innovation environment is happening in co-creation with all stakeholders and platform thinking is strongly used in the design and implementation phases. The overall structure is continuously evolving and consists of many independent entities, which are geographically dispersed (although in near proximity). The kernel of this structure is called "Innovation Alley" and it's formed by three fairly new entities namely Design Factory, Start-up Sauna and Urban Mill. Start-up Sauna is also the host of the world famous start-up gathering called SLUSH, which itself demonstrates the full potential of a global approach and fresh thinking.

If we compare this structure with a traditional Triple Helix model, we may say, that all the main elements of Triple Helix model with pipeline thinking are re-placed with more dynamic practices. The incubation and accelerator programs in the area are driven by pull - approach, co-creation principles and open innovation 2.0 practices. Also the global trend to increase thematic focus is well taken care of; Urban Mill is a global centre for urban development and the brand new accelerator **Vertica**l[3] located nearby will become a hub for healthtech business. The proximity of major global conglomerates like Microsoft, Kone, Neste Oil, Samsung and VTT Technical Research Centre of Finland adds value to the overall ecosystem.

Platform thinking

The first conceptual definition of platforms, which we noticed was by **John Hagel, John Seely Brown** and **Lang Davison** in their brilliant book "The Power of Pull" (2010). They introduced the notion 'pull platforms'. The authors defined the new phenomenon as following:[4]

> *"Pull platform is used metaphorically to describe frameworks for orchestrating a set of resources that can be configured quickly and easily to serve a broad range of needs".*

With a wide set of case examples they were able to explain already few years ago the vital benefits of the platform thinking. They also predicted with amazing accuracy the vast implications, which platform thinking will bring to the market place.

The fundamental changes that accompany every shift in the industries that are getting transformed by the platform thinking are 1) new networked markets get created 2) new sources of supply start to emerge and 3) new consumption patterns are created.[5] This is certainly true when talking about traditional platforms, but we want to add to that also the new dimension offered by competence platforms. So we will add that 4) new and unique combinations of competences will be created.[6] We will discuss this later in more detail, but let's try to elaborate the idea of pull platforms a bit deeper.

---

[2] Pia Lappalainen, Markku Markkula, Hank Kune (eds): "Orchestrating Regional Innovation Ecosystem – Espoo Innovation Garden" (2015), Otavan Kirjapaino, Finland

[3] http://www.geektime.com/2015/08/31/vertical-vc-firm-launches-finlands-first-healthtech-accelerator/

[4] John Hagel III, John Seely Brown & Lang Davison: "The Power of Pull – How Small Moves, Smartly Made. Can Set Things in Motion", Basic Books, New York, USA (2010), page 76

[5] http://platformed.info/platform-stack/, Sangeet Paul Choudary.

[6] Ilkka Kakko, Mika Lavikainen, Tatiana Glotova: "netWork Oasis: New Practises for Emergent Collaborative Working Environments" p. 338 in a book by Luis Camarinha Matos, Hamidesh Afsarmanesh, Martin Ollus (eds) "Network Centric Collaboration and Supportive Frameworks", Springer, NY, USA (2006)

John Hagel et al have analysed 'pull' driven platform thinking and they conclude that to exploit the opportunities created by uncertainty, pull platforms help people to come together and innovate in response to unanticipated events, drawing upon a growing array of highly specialized and distributed resources. (p. 80) With this feature a pull platform becomes a real asset. In the volatile and uncertain conditions the developments and the encounters often are unexpected and hence unpredictable. Pull platforms, and like we will show later on, the concrete form of them called competence platforms, will help to react and prepare for the unexpected.

One of the positive consequences generated by platform thinking is understood when platforms are studied from the learning perspective. The tacit knowledge is in many respects the most valuable type of knowledge but also the most difficult to acquire. It has been impossible to think about ways of scaling tacit knowledge effectively, but some first experiences indicate that tacit knowledge can be created and distributed in scale when the critical mass in the platform is achieved. And this is largely depending on the engagement level of the communities working within the platform, so the gravity factor becomes vital.

Interestingly John Hagel et al come close to what we call competence platforms, when they describe 'creation spaces'. They believe that the challenge in designing and managing 'creation spaces' is to provide scalable environments that can accommodate a large and growing number of participants and create conditions for them to learn faster from each other as the number of participants grows. (p.130) Our experience using Skillhive (a Finnish competence platform service explained later) within our customer project validates this theory. Some of the swarms created within the platform quickly self-developed in an inspiring way so, that learning was the most important driver for joining the swarm. And to certain extent all participants were learning faster during the process.

The fundamental differences between pipeline thinking and platform thinking are described in the picture 1. The conclusion easily seen in the table is that platform thinking provides great benefits, which are urgently needed in the complex and uncertain circumstances we are all facing today.

Pipeline - thinking	**Platform - thinking**	**Main benefits of the platform - thinking**
Command and control Gate-keepers	Collaboration, Low entry, zero-friction	Engagement, Creativity
Institutions, Shareholder value, Career	Entrepreneurship, Stakeholder value, 'Collectives'	Sustainable ecosystem thinking
Project management	Serendipity management	Disruption
'From me to you' – lectures, Conferences, Teaching	'From anybody to anybody'– sessions, Un-conferences, Learning	Apprentice attitude, Diversity
Innovation intermediaries Brokering Regional/national approach	Competence platforms, Community building, Global approach	New and unique combinations of competences

Push principle, Individuals as consumers and resources	Pull principle, Individuals as co-creators and supporters	Attraction, Gravity Flexibility, More effective allocation of talent (self-organized)

Picture 1. Pipeline-thinking vs. platform-thinking (© Ilkka Kakko)

Brief history of platforms

Platforms, as we understand them, have always existed. Even the ancient Greece was known about Agora, a meeting spot and market place, the arena where all collaboration and interaction happened. According to Wikipedia[7]:

> *The Agora (/ˈægərə/; Ancient Greek: Ἀγορά Agorá) was a central spot in ancient Greek city-states. The literal meaning of the word is "gathering place" or "assembly". The agora was the center of athletic, artistic, spiritual and political life of the city. The Ancient Agora of Athens was the best-known example. The notion itself is based on the two Greek verbs ἀγοράζω, agorázō, "I shop", andἀγορεύω, agoreúō, "I speak in public"*

The development of modern collaboration platforms originates back to 1980's, when some single enterprise centric models were implemented (IBM, Zachman Framework, VERA, GERAM). The focus was in ICT enabled solutions, the usability improved with the technology development. The following step was in 1990's when more network-centric development projects with an increased emphasis on the networks and their properties were launched. The platform development gained momentum around 2000 by the introduction of the notions Virtual Enterprise, Virtual Organization and especially Virtual Organization Breeding Environment (VBE), followed by the foundation of PRO-VE organization. Later on around 2002-2003 the research framework expanded to Collaborative Networked Organizations (CNOs) and ECOLEAD project consortium was established in 2004. ECOLEAD is still considered to be the cornerstone of the academic research in this area.

At the same time some parallel developments and projects with overlapping areas of interest and piloting include:[8]

- grid community, which has moving towards virtual organizations and is trying to consider business perspective, as in the case of Enterprise Grid Architecture initiative (EGA 2005)
- e-government, which is a wide area but has some common elements, when it addresses the cooperation among different governmental organizations, as illustrated by the Federal Enterprise Architecture (FEA 2005)
- social networks and virtual communities are the areas that although at that time not offering much in terms of reference models, have developed considerable background in terms of basic properties of networks with a strong basis on graph theory
- collaborative networks mapping initiatives such as THINKcreative, VOmap and others which have contributed to the identification of the research in this area

The global introduction of social media platforms, like Facebook, Twitter, LinkedIn, Instagram, Pinterest etc. accelerated not only the technological development but also changed the social and economical aspects of our behaviour. The use of these platforms inside the business community together with the introduction of so called Enterprise Social tools like Yammer, Jive Social Business Platform, Salesforce Chatter and SAP Jam enabled the wide acceptance of connectivity within and

[7] https://en.wikipedia.org/wiki/Agora

[8] Luis Camarinha Matos and Hamidesh Afsarmeanesh "Collaborative Networks: Reference Modelling", Springer, New York, USa, 2008 p. 38

across the organizational borders. In this respect the traditional institutional business world was lacking years behind the open source community, where the use of different development platforms like Linux, Ubuntu and GitHub was already an every-day practice.

Physical places as platforms

The history of places considered as platforms originates really back to ancient Athens and Agora, or maybe even further to the history of mankind, even back to the times when our gathering-hunter ancestors got together around the bonfire. "I shop" and "I speak in public" – so the trade and knowledge sharing were the main motivators already at that time.

Can we verify the statement that also physical environment can act as a platform? At least we hear physical places often called as platforms. And certainly some artefacts and boundary objects – like ancient totem poles have this feature embedded. To clarify this from academic and also practical perspective we can refer to the definition of a platform by a distinguished platform expert **Sangeet Paul Choudary**: [9]

> *"A platform is a plug-and-play business model that allows multiple participants (producers and consumers) to connect to it, interact with each other and create and exchange value."*

According to Choudary a platform operates by architecting incentives that repeatedly pull participants to the platform, by providing a central infrastructure on which participants create and exchange value, and by matching participants with each other and with content/good/services created on the platform.

The approach to apply platform thinking in the design of physical environments is a new phenomenon. It is surprising that even within the most advanced organizations the 'office as usual' – philosophy, as we call it - lasted for more than a hundred years. The traditional office design followed the organizational structure of the rigid industry age thinking. The recent rise of coworking movement and freelancer economy was the sparkle to change the attitude also in the areas of office layouts and organizational communication patterns. That together with the widespread usage of social media tools and the increase of free-lancer work force intensified the development of working environments towards more open and more social structures.

Coworking movement had also wider impact; the rise of creative hubs in metropolitan areas and the buzz created around these spaces attracted also more traditional business people to study the phenomenon. Google, Facebook and Apple, among others, started to focus the design of their physical facilities from a fresh perspective. The new trend started around 2009-10 by the introduction of Googleplex and Apple's Spaceship design initiatives. The architectural solutions and management practises in these environments are based on the assumption that increasing diversity and social density will automatically lead to more creativity and serendipitous interactions. Although this is a simplified perspective of serendipity, it started a boom and soon the notion 'serendipity' became the buzzword of these developers and the mantra of Silicon Valley – management style.

In Europe the coworking movement created initiatives like HUB, nowadays known as **Impact Hub**, **WeWork** originally from US, **Seats2Meet**, **Talent Garden** in Italy and **Espoo Innovation Garden** in the metropolitan area of Helsinki. We will examine more closely in the case chapter of this paper both **Meetberlage,** Amsterdam, which is one of the leading locations in Seats2Meet and **Urban Mill**, a dynamic co-creation platform within Espoo Innovation Garden.

---

[9] http://platformed.info/platform-stack/

Platform classification

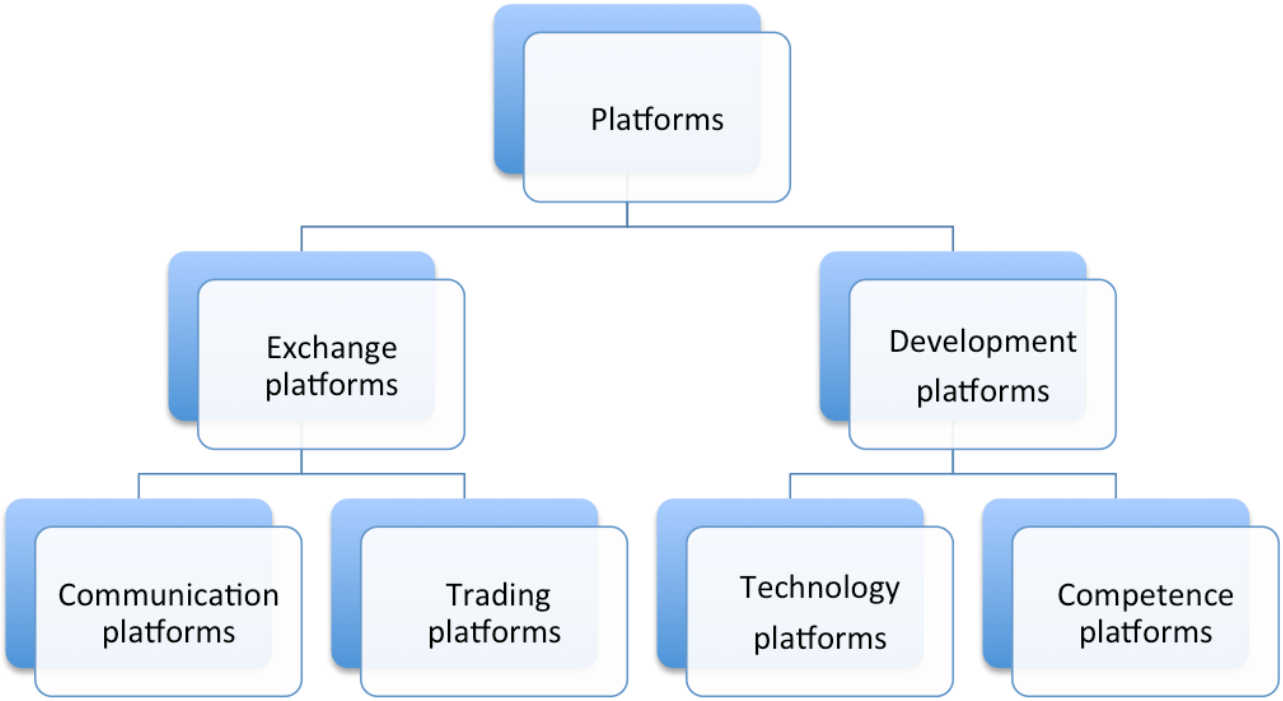
Platforms are quickly becoming an important topic in business development and therefore also in the innovation intermediary business. The vivid discussion around the most prominent business cases has taken the notions as 'platform' and 'platform thinking' to the limelight. Disruptive business models are gaining momentum and the triumphant business endeavours like Facebook, Google, and Amazon are showing us how to succeed in the times of the Postnormal Era. Platforms are here to stay and surely also to flourish; new variations of platforms with revolutionary characteristics are in the pipeline– or in fact emerging from these already existing platforms.

Platforms – what are they then? What is their role? How do they start to shape industries? How can we, as business owners, communities or private persons benefit from them? What are the good reasons, why we should try to understand the mechanisms?

We are witnessing an enormous shift towards the platform driven business environment. It has already changed many industries – like publishing, media, hotel and transportation businesses – not to talk about the eminent power of social media platforms even within the still traditional businesses.

The well working platforms enable low-entry, even close to zero-friction interaction between a wide varieties of participants. So in fact, we all have experienced weak signals of this every time we have visited our city's market square. A platform is an organized setting where producers and service providers meet with the customers and consumers, where their roles may swap freely according to personal preferences. Platforms are places where 'I shop and I speak in public' – principle is supported. The format and infrastructure of platforms have evolved just in recent years enormously, but they still carry some ambience of the ancient market squares.

There are several classifications of platforms according to their purpose and features. Our main classification is between physical and virtual solutions; all though the hybrid model seems to be the most advanced one. We divide platforms into exchange and development platforms and the argument here is that the purpose and the roles of platform providers and participants are very much different in these categories. Our classification is presented in the picture 2. Note: The figure looks like an organisational chart or hierarchy, but it is not a hierarchical model it's more like an ontology model. In the real business ecosystems these four types of platforms can perfectly mix and overlap as illustrated Urban Mill case in picture 4.



Picture 2. The classification of platforms

We have classified platforms in four types:

1) Communication platforms – like Facebook, Twitter, and LinkedIn
2) Trading platforms - like eBay, Etsy, Airbnb and Uber
3) Technology platforms – like Apple and Android development ecosystems, Amazon Web Services and Ubuntu,
4) Competence platforms – still in an emergent phase, some limited services available, but many promising development projects on-going

Competence platforms

Recently a new perspective around the platform development has started to emerge. This interest focuses on certain type of platforms, where serendipity can be harnessed. These are either physical premises and artefacts (like Urban Mill and Meetberlage) or virtual community and collaboration platforms. In the most interesting cases they form hybrid solutions, where the key features of physical/virtual are embedded in an engaging way. We have started to call them competence platforms[10] and they form the fourth dimension of platform classification. So far they are less developed than the three others, but there are many on-going and interesting development projects in the competence platform area. We will describe them in the Case chapter.

Competence platforms work as a natural base for vibrant community creation. In this respect they are supporting sustainable ecosystem development. Competence platforms support coincidensity – a mix of diversity and density – in an optimal way. But they also offer enough tranquillity and solitude for co-

[10] https://www.linkedin.com/pulse/20141128083212-72500-platforms-a-secret-tool-to-disruptive-innovations?trk=prof-post

created insights and value creation. They are the workspaces of the future, more like a 'collective' than a coworking space or an office, more like a breeding environment than a business infrastructure.

Competence platforms attract participants in, they enable the participants to combine competences and create favourable conditions for value creation. The fundamental design approach of competence platforms is based on serendipity management principles. Although the physical and virtual environments are designed to support 'coincidensity' the main focus is in enabling the most important elements of serendipity process; namely insight, discovery and value creation.

The practices once successful during the industrial age are no more valid today. In a world where new combinations of competences are continuously created those who base their actions on the rigid pipeline thinking are facing enormous challenges. The operational principles of industrial age do not match with the conditions of the Postnormal Era. The fundamental requirement for a well working innovation environment today will highlight a fluid, anti-fragile and adaptive perspective. The successful solutions are based on certain building principles and the main planning parameters for an ideal innovation environment can be listed as:

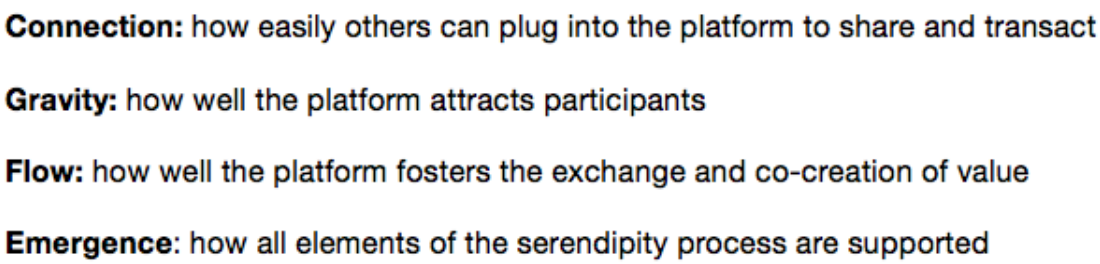
1) All interaction is based on pull principle
2) The operational practices respect the importance of serendipity
3) Open innovation 2.0. principles are widely in use
4) Different types of platforms are embraced in a balanced way

Why will the competence platforms disrupt the innovation intermediary market in the near future? Shortly, because they are more effective, engaging, interactive, agile and they are based on 'respect serendipity' principles. Competence platforms are supporting the vital phases of idea elaboration and business creation in the following essential areas:

- Team building and competence sharing according to the serendipity management approach
- Idea sharing and co-creation
- Combined idea and business proposal elaboration
- Embedded business model canvas
- Full integration with project management tools

In a well working competence platform the interaction happens without an outside moderator; if some moderation is needed it is based on peer-to-peer communication and support. Competence platform is a low-entry and almost a zero-friction environment providing both physical and virtual solutions to participants. But the most important feature is, that this type of platform supports in an organic way the growth of the surrounding innovation ecosystem.

The design principles for a well working competence platform can be divided in four areas described in the picture 3 below:



Picture 3. The design principles of a fully working competence platform (modified from Sangeet Paul Choudary).

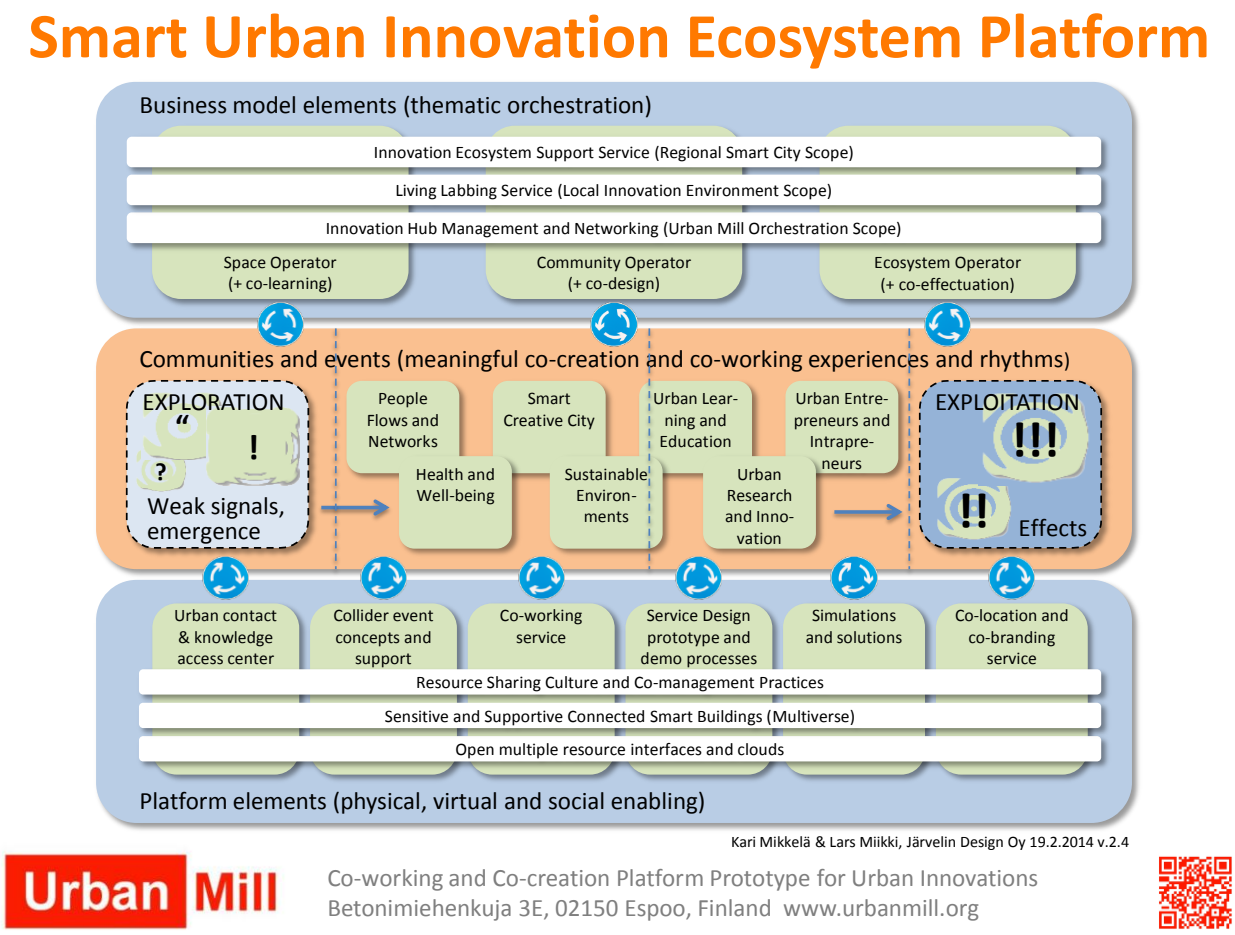
Implications on STP development

The volatile, uncertain, complex and ambiguous (VUCA) environment of the Postnormal Era sets new requirements also for innovation intermediaries. In these unpredictable conditions individuals, communities and businesses face an urgent need to create new tools and collaboration patterns. Competence platform thinking has proved to be productive in the complex business environment. The role of low-entry platforms rapidly becomes vital - not only for the survival but also for the success. In this respect it's surprising that the management teams of science and technology parks (STPs) so far have only limited understanding of the benefits gained by platform thinking. The Triple Helix model is still dominant. It is followed and daily operations are organized according to the model even though the limitations of the thinking are so evident in the contemporary business environments. Triple Helix mostly represents the old, industrial push-model with pipeline thinking and should be replaced with platform thinking.

The deeper reason that platforms have lately captured so many business leaders' imaginations is that they enable "pull-based" approaches, which have long been seen as the future of serving customers profitably. In the past, sellers have been limited by the economics of production and distribution to "push-based approaches," meaning that they simply made an efficient batch size of what they sold and delivered it onto the marketplace. A push-based approach is very efficient if the forecast is accurate—and can at least be profitable if, failing that, the marketer is able to alter demand with its pricing and advertising. But when entering the Postnormal Era, there are to many and too big "ifs."

The best way to adapt to the challenging conditions is offered by the clever use of platforms. Here we want to show an example from Espoo and the picture below explains the creative platform thinking implemented successfully in Urban Mill case. The platform elements are illustrated on the lower level and even though they don't use the same terminology as we in this paper, the main operational elements are presented. The competence platform is not clearly shown in the picture, but it is practically an overlapping layer, in which the physical space and the orchestration are in elementary role.

The most valuable part for the STP context is the Urban Mill's Innovation Orchestration business model. It combines three logically different operator roles: 1) Space-as-a-Service Operator (flexible and tailored space solutions for innovation communities), 2) Community-as-a-Service Operator (engaging, curating and uplifting innovation communities) and 3) Ecosystem-as-a-service Operator (co-created and co-generated solutions for wicked urban problems solved by competence and capability communities).



Picture 4. The platform thinking in 3rd generation science park environment (case Urban Mill)

The most engaging platforms are designed to follow pull principle. **John Hagel**, a distinguished business thinker, describes the power of pull platforms as below. This is an interesting advice because it can be applied to the competence platform design within STP environments as well:[11]

> *In pull platforms, the modules are designed being loosely coupled with interfaces that help users to understand what the module contains and how it can be accessed. Because of this loosely coupled modular design, pull platforms can accommodate a much larger number of diverse participants. In fact, pull platforms tend to have increasing returns dynamics – the more participants and modules the platform can attract the more valuable the platform becomes.*
>
> *Pull platforms tend to allow us to perform the following activities, with a blurring of the boundaries between creation and use:*
> *1) Find*
> *2) Connect*
> *3) Innovate*
> *4) Reflect*

[11] http://dupress.com/articles/platform-strategy-new-level-business-trends/?id=us:2sm:3tw:dup1051:eng:cons:041615:jhagel:bt15:author

For the STP environment a fully working competence platform (a hybrid model with physical and virtual elements) enables the extension of its ecosystem. A platform with enough attraction will create pull that attracts participants to the platform with a kind of social gravity. Platform builders must pay attention to the design of incentives, reputation systems, and pricing models. They must also leverage social media to harness the network effect for rapid growth. For the cohesion purposes both the bonding and identity factors must be included.

So within a STP environment an ideal competence platform can provide a number of benefits:

- It allows the participants / users to architect incentives that repeatedly pull new participants to the platform,
- It provides a central infrastructure on which participants can create and exchange value,
- It helps to match the participants with each other and with content/good/services created on the platform,
- It enables new and unique combinations of competences
- It helps to get connected to the global talent

CASE: Urban Mill

Urban Mill was described in 2013 UNESCO / WTA Training Workshop paper "The Fundamentals of Third Generation Science Park Concept" by Ilkka Kakko as an example of an emergent innovation platform. At that time the implementation of the concept was in full speed and the founders and the core team had plenty of new elements and practises on their "drawing board". So it's both inspiring and instructive to check the current situation of Urban Mill.

Kari Mikkelä, the co-founder of Urban Mill, described the creation and the on-going development phase two years ago:

> *"Urban Mill is a facilitated innovation journey, where the collaborative actions and creative dialogue between different Urban Mill actors is boosted and facilitated by using physical, virtual and social boundary objects, like shared concepts, methods, probes, prototypes, demonstrations, test-beds and living labs. Joint development work is guided by a co-created broad vision rather than by strictly pre-planned processes. Urban Mill is not only a platform for coming together, rather it is a venue to re-transform, co-align and channel its users objectives, knowledge, practices and expected development outcomes for fitting better to the future urban life."*

At the moment we can say that two years of hard work and commitment has taken Urban Mill pretty far. The co-creation process of the concept (you have to walk your talk!) can today proudly validate that many of the ideas and plans are now implemented. Urban Mill is now a fundamental element of Espoo Innovation Garden, which is so far one of the best working pilots of the 3GSP concept.

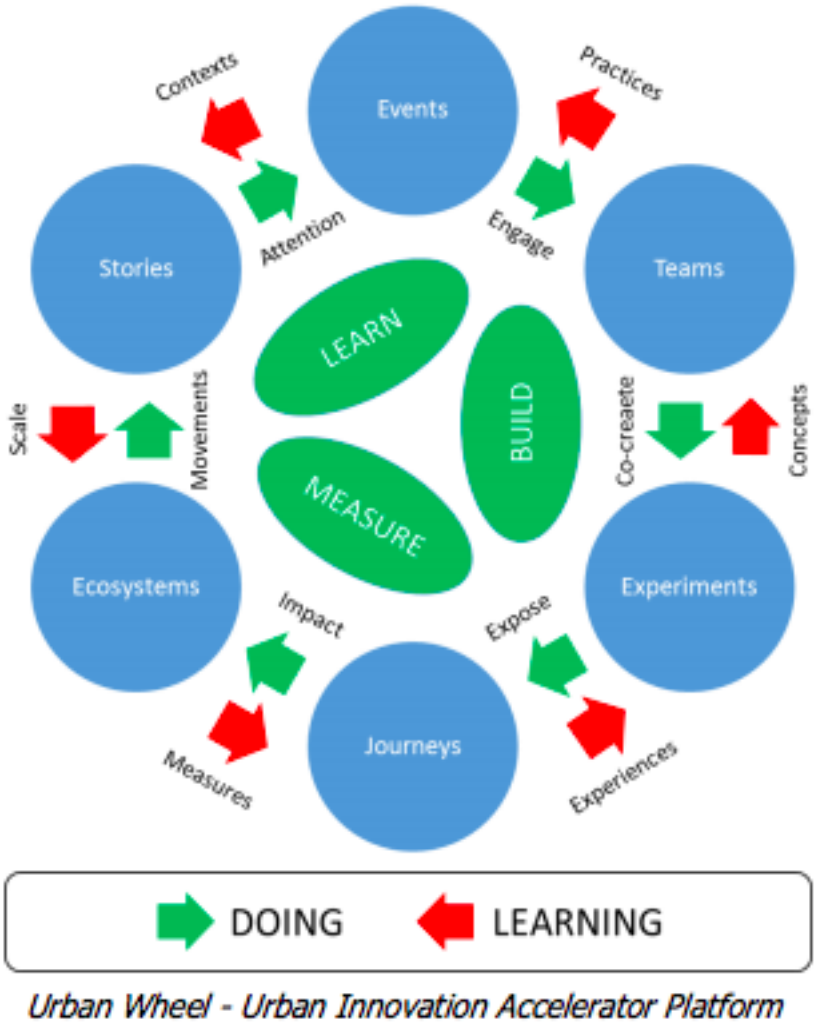
Urban Mill is known nowadays as a space, community and service, a dynamic global actor within urban development. The people in Urban Mill like to call the space as "Co-working and Co-creation Platform Prototype for Urban Innovations – Entrepreneurial Thought in Action".

The role of Urban Mill at this stage of its life cycle can be highlighted in three areas:

- Transformation means for it's stakeholders
- Focal point for developers and user communities
- Physical and virtual co-creation and development platform

The results of the pilot phase are impressive. Until summer 2015 more than 50.000 persons have been engaged physically or digitally with Urban Mill services and over 1000 urban innovation pioneers have contributed to Urban Mill's co-creation activities through over 1500 registered events, by over 500 organizational connections, over 100 implemented prototypes and experiments, and by over 50 startup team efforts. Nearly 10.000 national and global visitors have been introduced to the concept by physical presentations and over 1000 via social media and 500 blog posts.

After two years of intensive pivoting and co-creation the concept is streamlined and is named Urban Wheel™ – Urban Innovation Accelerator Platform. The picture 4 describes how the activities are linked and how the process always is based on both ”Doing” and ”Learning”.



Picture 4. Urban Wheel™ – Urban Innovation Accelerator Platform.

Many of the key characteristics of platform thinking are embedded in the Urban Wheel™-concept. The attraction is created mainly by the events and stories. Even though the concept itself is pretty focused

on urban development, the ambience and the flexibility plus certain kind of 'roughness' of the environment have attracted events from very diverse backgrounds. The list is impressive:

- Energizing Urban Ecosystems (EUE) Consortia's Industrial R&D&I workshops (30+),
- City of Espoo's cross-functional coordination board meetings (continuously),
- South Korean Startup Summer Camp (4 weeks 2015),
- RCA - Royal College of Arts (London) & Aalto University ARTS (Espoo) Learning-as-a-Service Booth Camps (yearly, one week),
- Regional City planning workshops (4-8 yearly) for Otaniemi Campus area (Espoo, Aalto, industry, citizens),
- Yearly Gaming Recruiting Events (up to 400 participants),
- EU Committee of Regions (CoR) Innovation Seminars (up to 200 participants),
- EU Open Innovation workshops (global audience),
- Lean LaunchPad Startup Courses (created by Stanford University) by Aalto Centre for Entrepreneurship (ACE),
- Architectural Master Courses (24/7 co-working for 3-5 months: e.g. Kigali City Planning (Rwanda) & Modular Home Concepts for Toyota Home (Japan)),
- Urban Innovation Hackatons (3 days) for Baltic region developer teams,
- Product Design Galas (400-600 visitors once a year) by Aalto Design Factory,
- Open Innovation and Maker Days for Citizens of Espoo (200+ visitors, yearly Espoo Day events),
- Inter-disciplinary Creative Sustainability Master Courses (1-4 weeks (/year) by Aalto University,
- European Institute of Innovation and Technology (EIT)
- Re-union events of different Aalto Alumni societies,
- Thematic professional associations (several) home base activities.

The role of these diverse events in the ecosystem building is vital. Many of the best developments and impactful results have their seeds in the serendipitous encounters happening in these event settings. Team building is mostly orchestrated by the founders of Urban Mill (who call themselves as 'orchestrators'), but recently also peer-to-peer orchestration is gaining momentum. This is clear evidence that the community building has reached a stage where a vibrant core tribe of 'urbanmillers' is becoming active and engaged. The layout and flexibility of the physical space and the meanings embedded in the boundary objects became part of the winning formula in this respect.

Urban Mill is at the moment going through the "proof of the concept" – phase. The action is still mainly local, although the members of various Urban Mill communities are from very international backgrounds. That might be the reason why there has been so far no need for a virtual competence platform. Team building and idea elaboration are based on physical presence with the help of social media channels like Facebook, LinkedIn and Twitter. The QR-codes and Google tools are also in everyday use. The orchestrators think that the need for a well working competence platform will concretize as soon as Urban Mill takes the next step in their concept development. The scaling up of the concept will add new locations, which are geographically dispersed and then there is an urgent need for a platform where global competencies can be shared and new combinations created.

Case: Meetberlage

Meetberlage is a downtown location in a big European metropolis Amsterdam. The company is located in a beautiful old building which is well know for the locals as a former storage and a working office of Dutch harbour officials. The renovation of the building and the interior design was carefully conducted so, that the original atmosphere of an old market place was restored. In fact, when first time entering the space, it's this real Agora – like ambience what you experience with pleasure.

Meetberlage is one of the biggest locations of Seats2Meet, a global chain of co-working and meeting places. Therefore it's natural that Meetberlage philosophy highlights the Society 3.0 thinking,[12] which was introduced by **Ronald van den Hoff** also known as the Founder of Seats2Meet organization. The business model is based on 'social capital', and the operational principles follow the Mesh. The social capital and the Mesh are described in more detail in **Sebastian Olma's** book "Serendipity Machine - a Disruptive Business Model for Society 3.0"(downloadable).[13]

The Mesh is a term used by Seats2Meet people and has very interesting overlapping characteristics with platform thinking. The Meetberlage – case has proven that combining the physical competence platform with a state-of-the-art virtual platform (in this case Seats2Connect) will create a nearly perfect ecosystem for a diverse business community. Our understanding is that the Mesh is overlapping in many important aspects with competence platform thinking. Here is how Sebastian describes the platform principles within Seats2Meet environment:

> *There can be no doubt that Seats2meet.com's logic of prosumption[14] is one of its great attractions. Gerhard Schulze, Joe Pine's sociologist counterpart and the author of "Erlebnisgesellschaft" has pointed out to the fact that today people expect their work environments to provide them with "meaningful experiences" Such experiences provide feelings of belonging and contribution – not necessarily to an organizational structure but to various open value networks. Seats2meet.com has become a platform for new kinds of value networks that together are co-creating a new economic playing field. At Seats2meet.com, they call it "the mesh": a constellation of networks of professionals forming dynamic collective intelligence to which everyone contributes meaningfully in his or her own way. The mesh dynamically connects networks, raising their capacity exponentially. This is not your relatively static Facebook or LinkedIn group; people come and go all the time: networks connect, disconnect and reconnect. Yet the mesh as an ecosphere remains intrinsically stable: it evolves, and this is the condition for its survival.*

Meetberlage attracts a variety of people because of its central downtown location. Compared to Urban Mill they have more active free-lancers and already established companies – and not so many students and 'wanna-be-entrepreneurs'. The ambience in Meetberlage is more local than in Urban Mill – although very metropolitan. The global element is in Meetberklage provided by the Seat2Connect virtual platform, in Urban Mill this virtual element is missing and the global connectivity is mainly depending on the big numbers of international visitors and foreign students.

Even though the essential elements of platform thinking are embedded at Meetberlage, they have noticed, that the participation of larger companies could be improved. Just recently Meetberlage has co-created a promising initiative called Solution Society[15] in which they collaborate with some big institutions in order to build the vital gravity for attraction. Sebastian Olma explains that the Mesh is going to be a necessary condition for the future value creation with larger companies, when he finishes his chapter with an insightful remark:

> *The crucial condition for a functioning mesh is authenticity, making it hard to achieve with corporations. Only if the sense of belonging and contributing is genuine will a third space emerges where co-consumers are happy to be co-producers as well.*

---

12 *Roland van den Hoff: " Mastering the Global Transition on Out Way to Society 3.0" (2014), Society 3.0 Foundation* http://www.society30.com/download_book/society30updated.pdf

13 http://theserendipitymachine.com/ (downloadable), pages 34-37

14 prosumption = production + consumption

15 http://solutionsociety.nl/

Big institutions and corporations need so-called 'intrapreneurs'[16], a new tribe of employees with entrepreneurial spirit and flexible schedules. They might have enough authenticity to become trusted members of Mesh-communities and hence help their corporations to connect to the dynamics of the Meetberlage ecosystem.

The Founder of Meetberlage, **Felix Lepoutre**, explained in my interview the benefits of belonging to the global chain:

> *"First of all, in S2M you'll find a group of entrepreneurs all over the world who are connected through a shared vision, and help with the constant updating and changing of this vision. Together we are building many platforms that facilitate the world that's mentioned in this vision, and are always piloting and testing out improvements in the actual outcome of the vision. Decentralised communication between these operators of platforms makes it easy to improve all platforms as 1 platform in the network improves itself. Also, there's a lot of specific knowledge and experience needed to set up a proper Seats2meet platform, and a constant reminder of the vision and experiences in the past. This is always available in the eco-system.*
>
> *Secondly, the name Seats2meet.com attracts people who understand the society3.0 vision, and who have an urge to live in that society. These people are perfect customers since they are willing to help build this society, and are eager to use the platforms (seats2meet) where it's being built together.*
>
> *Thirdly, Seats2meet.com facilitates great software that's needed to build and run these platforms. They offer it at a great price, and for some parts even on a revenue-share basis, sharing the risk with the entrepreneurs who build the platforms locally. Since the software is an outcome of the vision, and input on the vision from operators is always accepted and discussed, the software always matches our every need.*

The operational tasks on global level are mostly organized by the virtual platform Seat2Connect. Felix has a clear vision about the importance of such service. He continues to explain the benefits:

> *"I always look at it as a toolkit for operators. Where operators facilitate the physical platforms that are needed to build and connect society3.0, they are great at connecting people. Hence the name 'operator', that comes from a telephone operator. They make sure there are plenty of unexpected and relevant encounters on the platforms. The virtual equivalent of this is S2M Connect. It not only helps the operators in bringing a great overview of the competences that are available for connections, it also enables the users to connect by themselves and make the life of an operator easier. Lastly the artificial intelligence behind the platform functions as an operator in it, stimulating more and more serendipitous encounters.*
>
> *The concrete output of this is facilitated by chats, questions to the network, meets (meet for a cup of coffee), handshakes (a sort of like), and of course many offline encounters after someone looked at the different people and competencies in or near the place they are in.*

Case: Virtual competence platforms

The market of virtual competence platforms is evolving in an ever-increasing speed. Since my article about Platform economy was published in LinkedIn on November 2014, quite a few development

---

[16] http://www.slideshare.net/ilkkakakko/new-book-ilkka-kakko-oasis-way-and-the-postnormal-era-how-understanding-serendipity-will-lead-you-to-success, see pages 19-20,

teams, which either have an on-going project or are planning to start a project in this area, have approached me. So keeping in touch with these teams has helped me to increase my understanding of the current status of global competence platform market.

The variety of on-going competence platform initiatives is high, but roughly they can be categorized in three classes:

1) Purely commercial products with invitation only
2) Open, low - entry projects for commercial usage (with or without a paid upgrading option)
3) Open, low- entry projects for mainly social entrepreneurs and impact projects

The teams working on these projects are in most cases pretty small with limited resources, so pivoting and launching new features will take time. The ambience level is generally not very high, the only exception being Seats2Connect.

Unfortunately we have no chance to analyse all of them in the scope of this article, but we will anyhow give a short overview and links to their web pages. Anyone interested in these initiatives can study these for their own purposes, and as said, the variety is high and to find the best option needs some background work in each case.

Skillhive https://skillhive.com/# is a Finnish service, which has been on the market for some years already. It is originally designed for the use of HR departments in medium sized and big corporations. It has many features of an ideal competence platform and we have our own user experience of it. The design is based on swarms, which can be categorized on different types (ideas, projects, trainings etc.). People can be invited or they can find the interesting swarms by themselves or by someone else's recommendation. The service uses also a clever LinkedIn API and the competences in LinkedIn profiles can automatically be uploaded to the user profile. The other extremely useful feature is that they list not only competences ('skills') but also the motivational factors ('wills'). This feature helps in a brilliant way the mentoring process within the platform.

Skillhive could be a good option to have as a foundation for anyone interested in competence platform development. The management team in the company behind the service (Intunex Ltd) is pretty conservative and so far they have focused on potential customers in the HR field. If they will decide to acquire more resources and focus the future development into the direction of global competence platform, then this could be a great service for 3rd generation science park environments as well..

Seat2MeetConnect http://connect.seats2meet.com/ is a platform used by Seat2Meet customers globally. They have the benefit of having a large community already using their physical premises all over the world. The management team in Seats2Meet have in recent months really discovered the huge potential in the global competence platform development. They have even revised their strategy and today they are offering their competence platform service as the main attraction to join the global chain. They have many creative and inspiring elements as described in the context of Meetberlage – case. The development work is properly resourced and the team have also two algorithm experts to design some 'serendipitous' elements for the service. The new version is so much under development that at the moment there is not a chance to give any user evaluation of the service. The expectations are high and they have all the elements to be successful in the future.

Focal Shift http://focal-shift.org/ is a brand new initiative based on Australian - US collaboration. Their focus is on the social entrepreneurship market and we have followed the development pretty closely. The team is small and so far they have operated with very limited resources. Focal Shift just launched a crowdfunding campaign in order to speed up their development. If you are interested, you can join here: http://www.gofundme.com/focalshift

Babele http://babele.co/ is a more established solution for social entrepreneurs. They have been on the market for a while and their service has already quite good numbers of participants. They have

also a well thought structure in their service and even business model canvas by Alex Osterwald is embedded.

Part-Up http://www.part-up.com/ is a new initiative with great potential. They seem to have a high ambition level and have put together a good and inspired team. So far we have not had any discussions with the team, but we surely will follow also their progress. They might just have found some momentum in Netherlands and the track record and the references they have gained in a very short time (6 weeks) are impressive.

An invention platform **Quirky** was dropped from the list of competence platforms, because it is so clearly an idea driven invention platform (so in our categories something between development and exchange platforms). In Quirky the idea elaboration remains the key interest and it does not support clearly the competence development and that kind of 'swarm'- approach when co-creating a vision and attracting new combinations of competences. http://www.quirky.com/

Conclusion

We are entering the Postnormal Era with VUCA (volatile, uncertain, complex, ambiguous) conditions. The tools and theories once superior during the Industrial Age are no more valid. New approaches and ways of thinking are urgently needed and this highlights the challenges, which also the STPs are facing.

The rapid transformation of our business environment has resulted to radical changes in the innovation system. The once dominant STP organization in Finland Technopolis Plc. has revised its strategy and given up the Triple Helix model and all incubation and development programs. This gave space to a new infrastructure to emerge. Within Espoo Innovation Garden small and entirely new innovation entities are developing an infrastructure with elements close to 3rd generation science park concept (3GSP). The entire Espoo Innovation Garden ecosystem evolves continuously, and the development process is supported by the co-creation and open innovation principles. Pull approach and platform thinking are widely used and the practical experiences and impact created within Urban Mill ecosystem are really encouraging and adaptable also in the global STP scene.

Platform thinking has proven to be successful in conditions where predictability and stability are replaced with uncertainty and complexity. Many industries are already disrupted; new players with superior operational models are entering the field. This will soon happen also in the innovation intermediary industry, the once successful Triple Helix model becomes quickly out-dated. It will be replaced with more dynamic and engaging models where co-creation, open innovation and serendipity management are the main drivers. Platform thinking provides solutions in the form of physical and virtual competence platforms, where the interaction is peer-to-peer driven and mostly self-organized. The role of gatekeepers and brokers, once so important in Triple Helix model, is re-placed by innovation gardeners and platform designers.

The traditional locations of STPs in university campus areas will be challenged by the physical platforms in the downtown locations in metropolitan areas. Meetberlage in Amsterdam is a perfect example of this development. The blurring of work-life balance in freelancer and SME communities is changing out understanding of the hours we consider as 'work'. Downtown locations are much more accessible and provide so much more buzz and vivid ambience than boring campus areas. Urban Mill on the other hand is fighting this trend with the help of the entire Espoo Innovation Garden master plan and a new and fast metro-connection to downtown Helsinki.

The virtual competence platforms are developing quickly and will play a significant role in the future. We listed some of the best known and promising developments in this area and explained some of our experiences when using one of them in our customer project. In the competence platform market the

winners will be those service providers, who can offer low entry platforms with massive gravity. The attraction of the competence platform comes only from the quality and quantity of the participants. Critical mass is needed and those platform providers, who already have large communities in their ecosystem, will have a huge competitive edge. For the global STP community (like WTA) platform thinking offers a unique opportunity to scale the operations and build a powerful structure with real impact.

References

[1] https://www.academia.edu/5460411/WTA_paper_final_20_8 Ilkka Kakko: "The Fundamentals of Third Generation Science Park Concept", UNESCO / WTA Training Workshop, Daejeon, Korea, 2013

[2] Pia Lappalainen, Markku Markkula, Hank Kune (ed.): "Orchestrating Regional Innovation Ecosystem – Espoo Innovation Garden" (2015), Otavan Kirjapaino, Finland

[3] http://www.geektime.com/2015/08/31/vertical-vc-firm-launches-finlands-first-healthtech-accelerator/

[4] John Hagel III, John Seely Brown & Lang Davison: "The Power of Pull – How Small Moves, Smartly Made. Can Set Things in Motion", Basic Books, New York, USA (2010), page 76

[5] http://platformed.info/platform-stack/, Sangeet Paul Choudary.

[6] Ilkka Kakko, Mika Lavikainen, Tatiana Glotova: "netWork Oasis: New Practises for Emergent Collaborative Working Environments" p. 338 in a book by Luis Camarinha Matos, Hamidesh Afsarmanesh, Martin Ollus (eds) "Network Centric Collaboration and Supportive Frameworks", Springer, NY, USA (2006)

[7] https://en.wikipedia.org/wiki/Agora

[8] Luis Camarinha Matos and Hamidesh Afsarmeanesh "Collaborative Networks: Reference Modelling", Springer, New York, USa, 2008 p. 38

[9] http://platformed.info/platform-stack/

[10] https://www.linkedin.com/pulse/20141128083212-72500-platforms-a-secret-tool-to-disruptive-innovations?trk=prof-post

[11] http://dupress.com/articles/platform-strategy-new-level-business-trends/?id=us:2sm:3tw:dup1051:eng:cons:041615:jhagel:bt15:author

[12] *Roland van den Hoff: " Mastering the Global Transition on Out Way to Society 3.0" (2014), Society 3.0 Foundation* http://www.society30.com/download_book/society30updated.pdf

[13] http://theserendipitymachine.com/ (downloadable), pages 34-37

[14] http://solutionsociety.nl/

[15] http://www.slideshare.net/ilkkakakko/new-book-ilkka-kakko-oasis-way-and-the-postnormal-era-how-understanding-serendipity-will-lead-you-to-success, see pages 19-20,