

# Plural Innovation - Sourcing the Creative Crowd

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Karlsruhe  
December 2016

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## Why yet another concept?

In recent years, new types of participatory innovation emerged, gained prominence and became prevalent in countries around the world. Enabled by new technologies, more and more citizens have joined firms and other innovating organisations in open and interactive processes of innovation. From FabLabs and Makerspaces, new ideas, if not prototypes, are fed into large companies' internal thinking who in turn try to source knowledge by engaging with 'Makers' and 'Lead Users' in novel ways. Arguably, the long-established dichotomy of producing companies and consuming individuals is in the process of being overcome. While the advent of a 'prosumer society' – in which roles of consumers and producers become largely blurred – may be some way on the horizon still, it has become undeniable – and denied by few – that there is an emerging opportunity for nations' innovation systems to embark on a more reflexive and inclusive path of development than it was.

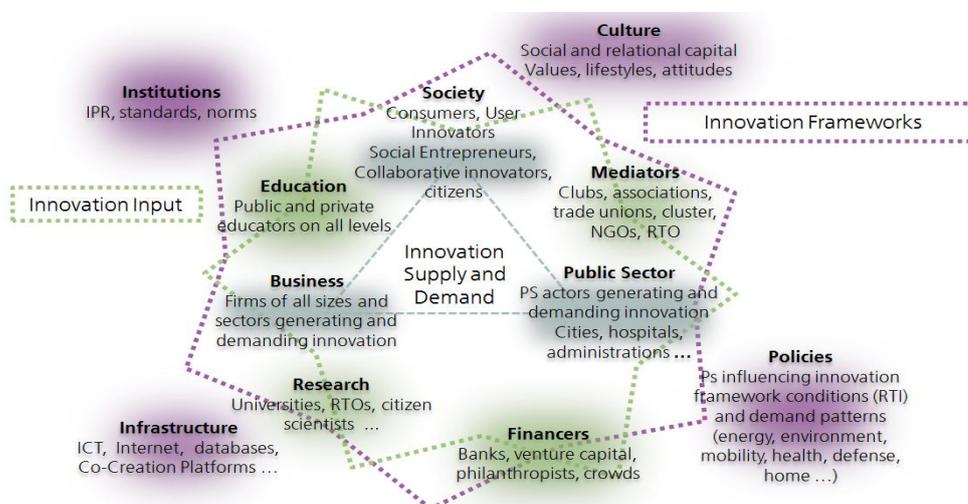
*The question of the day therefore is:*

*What do we make of this opportunity, why and to what end?*

*This position paper aims to provide first indications towards a possible answer.*

Against this background, its ambition is less that of putting forward yet another academic variety of innovation, on top of 'open innovation', 'user innovation', and various other concepts that have been prompted by the abovementioned trends. Instead, we want to, in times of uncertainty, put forward a central proposition: **for innovation to succeed and be relevant for the future oriented development of society**, related processes need to involve **citizens' creativity and understanding of application environments** to the greatest extent possible – which will, ultimately, be just as relevant as the degree of technological progress in specific fields.

To this proposition the paper will, in the following, relate as **plural innovation**, drawing – to no small extent – on the concept of reflexive innovation systems put forward by Warnke et al. in 2016.



Source: Warnke et al. 2016

# Hypotheses

## 1 Plural innovation balances and benefits society

### **Plural innovation sources the knowledge of people and in that way better balances diverse sources of creativity in society**

For all that innovation research has revealed in past decades, innovative insights, and certainly capabilities, are rooted in people rather than in formal organisations. Until very recently, however, innovation was an exclusive process, accessible only to those individuals who met certain qualification thresholds and belonged to specific organisations. As result, no small number of technological development processes became isolated from their environment – i.e. potential users, but also potential contributors. More recently, processes of inter-firm ‘open innovation’ were set up to mitigate this issue, but they have not yet removed the underlying principle that the boundaries of firms define access to innovation processes. In a slightly different way, ‘user innovation’, limits the role of to-be-involved individuals to their role of users, even though a truly open innovation process could and should involve a broader range of individuals based different roles and functions they fulfil in the reflexive innovation system.

The premise behind *plural innovation*, therefore, is a fundamental rethinking of access to innovation. In simple terms, this paper’s claim is that a radical opening of innovation processes would infuse a hitherto unknown element of diversity into innovation oriented efforts, creating more productive overlaps, prompting co-creation, leveraging synergies and thus triggering more emergent processes that might ultimately lead to more and better innovation outcomes. At the same time, plural innovation balances the different elements of producers’ and users’, experts’ and laymens’, collective and individual knowledge that are articulated through various actors in the innovation system – be they concerned with innovation proper or with defining framework conditions relevant to innovation. As a result, innovation processes would become more integrated with society per se.

Instead of just forming one neatly delimited subsystem of society, plural innovation extends into as many areas of the societal system as possible, making innovation a function of people’s everyday life and a source of societal transformation in which every citizen feels empowered to have a part.

**Overall, concrete societal benefits of plural innovation would include:**

- Emergence of new research topics and fields - Greater visibility of results -
- Broader interest in innovation - More competencies among citizens -
- Higher relevance of innovation outputs – Earlier response to societal trends -
- Changed approach to risk - Decrease in misconduct -

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## 2 Plural innovation is good for the economy

### **Plural innovation leverages the productive power of diversity and enables iterative innovation processes that lead to new applications**

By engaging in broader and more diverse communities, plural innovators have more and better opportunities to consider options from different perspectives. As in foresight processes, interaction in diverse teams helps to remove perception filters and preconditioned ways of thinking. By engaging with experts from other disciplines, users facing challenges in various areas of application and observers sensing early signals in crucial groups of society, new avenues of ideation may materialise and otherwise missed outcomes may be achieved. In parallel, thoughts and ideas will mature and improve by to need to explain them to others at early stages. At the same time, engaging in innovative thinking in new environment helps to reverse the direction of thinking finding e.g. that seemingly „wrong solutions” may be the right ones for another problem. Against this background, disclosure and discussion are essential strategies for plural innovation.

In general terms, opening up processes of innovation helps to break their linearity, allowing contextual application knowledge to feed into considerations right from the beginning – before the technological development process starts – as well as productively merging different lines of development with another at various stages of the process. By forming a nexus between multiple inputs and multiple outcomes, plural innovation forms a room for the iterative, evolutionary reflection on ideas, problems, and solutions, replacing a target oriented process for the benefit of a specific actor by a room of mutual engagement and interaction – financed jointly, based on the premise that, eventually, everyone benefits. Importantly, this does by no means imply that at certain stages, or from a certain stage, innovation processes should not be transferred into environments driven by individual, gain-oriented motives. Certainly they should. It is, however, to suggest that more traditional R&D processes should become well connected to arenas of plural innovation.

Hence, the notion of plural innovation does not imply the call for a paradigm shift that replaces proprietary innovation. It does, however, suggest that the systemic involvement of (relevant) citizens will lay the foundation for more desirable for society, but also economically more profitable innovation.

**Overall, concrete economic benefits of plural innovation would include:**

- **More focused processes based on better understanding of users’ needs -**
- **Increased productivity due to broader and more diverse knowledge input -**
- **Easy commercialisation through channels that initially spurred development –**

### 3 Plural innovation and spatial diversity

#### **In pursuit of its general socioeconomic ambition, plural innovation can help resolve pressing issues of territorial disparity**

Plural innovation is based on the involvement of actors from diverse socioeconomic contexts. In large urban, different and diverse societal subsystems can typically be found in more or less the same spatial environment so that additional momentum can be gained from connecting them locally. At the same time, regions and localities – both urban and rural – form in themselves specific ecosystems, characterized by particular socio-economic arrangements, actor constellations and institutional framework conditions into which all innovative efforts are embedded. As much as plural innovation profits from interfacing different societal subsystems locally, it will therefore in additional ways profit from the interregional networking of regional innovation ecosystems. In any case, existing interfaces in innovation systems are in the majority of cases already of an interregional nature.

Quite commonly, areas of „local buzz“ in specific regions are connected by global networks of knowledge exchange. So far, however, many such networks focus on an exchange among leading regions, disconnecting areas in between. In processes of plural innovation, however, precisely these areas could become very relevant – even where they are mostly characterised by technology adaption. Based on the general proposition of plural innovation, it follows that traditional technology hubs would profit from building stronger and more diverse linkages with non-leading regions. The motivation to do so could be application and testing, but, at the same time, the aim to leverage additional creative potentials. From peripheral regions, specific competences of local actors and societal groups can be fed into the development process and become pivotal in making innovations effective for everyday application in the business sector. In that sense, the notion of plural innovation connects with an extended notion of entrepreneurial processes of discovery that take forward an initially broad-based exploration of opportunities into the concrete pursuit of new, additional domains based on a consideration of local, societal needs.

In summary, participation and involvement in the innovation process should be broadened not only in selected hotspot environments but also in a geographic sense, with a view to relevant societal groups and creative individuals based outside of an economies traditional hotspots of development.

- With a view to regional and territorial policy, more plural innovation would:**
- alleviate feelings of exclusion in peripheral areas by involving local actors -
  - help produce objectively better and more relevant solutions for such areas -
  - leverage the underutilised potential of peripheral regions as Living Labs -

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## 4 Plural innovation will not emerge by itself

**New technologies enable plural innovation, but they cannot enable a more plural innovation system without accompanying social & political support.**

In earlier times, innovation was the process „ahead of the product” which was then only evaluated by „buy or non-buy” decisions of the intended customer groups. Today, these mechanisms have changed, notably driven by technological advances. While the Internet of Things provides constant feedback to product and system solution providers – even without including customers actively in the process of innovation – many new formats of active and conscious participation of citizens, like FabLabs or Makerspaces, have been set up. Moreover, the dynamic digitization of industry and advances in additive manufacturing come with the promise that – in a few years’ time – producers may be able to spontaneously react to any newly emerging needs of customisation on a daily basis. Through constant connectedness to the internet and the broad-based availability of ‘frugal’ tools, citizens have gained a hitherto unknown ability to access processes of innovation.

That being said, however, the availability of technology is merely a necessary, yet not a sufficient condition for plural innovation. The emergence of a genuine culture of plural innovation and the substantive extension of a Maker Communities beyond some niches of ‘nerd playgrounds’ requires awareness, commitment and, not least, societal backing. Without a conscious accompanying societal process, network technologies may well trigger command-and-control structures instead of balanced and accessible plural innovation systems. Despite its bottom-up premise, therefore, plural innovation needs political backing. Without suitable frameworks and nudging support it will not come about on its own. Like most processes of interaction and arbitration in reflexive societies, moreover, processes of plural innovation are likely to be contested, create friction and – occasionally – fail. For such situations, new institutions will be needed to contain disputes and ascertain productive outcomes.

Far from a self-fulfilling prophecy, plural innovation is therefore so far a normative proposition, based on the (well-founded) belief that support to greater openness and freedom of contribution in the innovation process provides the best option to exploit the opportunities provided by the current technological transformation.

**In general terms, therefore, policies to support plural innovation should:**

- Promote and champion inclusive approaches on diverse platforms -
- Encourage broader and more inclusive project consortia in public funding -
- Mitigate individual risk of engaging in more inclusive processes of innovation -

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