



**|| 28 SEPTEMBER 2017 ||**

**|| DESIRE FOR MEANING ||**

*Making Democratic, Decentralised, Distributed Business Models*

***Event Brief***

This document presents some of the reflections which emerged during the workshop "***Desire for meaning***", which was aimed at ***boosting knowledge sharing and learning about the radical new forms of production rooted in maker manufacturing***, showing how commitment to open-source principles, democratic participation and transparency can drive innovative and sustainable business models, production processes and organizational forms.

By raising awareness and showcasing ***existing cases of startups and enterprises*** that are already experimenting with this new production paradigm, the workshop has provided manufacturing businesses and stakeholders with the opportunity to test and play with business models' open innovation, and with its implications in terms of policies, philosophy and practice.



introduction by

**Dario Marmo**

*LAMA Development and Cooperation Agency*

*“The OpenMaker initiative aims to create a transformational and collaborative ecosystem that fosters collective innovations within the European manufacturing sector and drives it towards more sustainable business models, production processes, products, and governance systems by bringing together manufacturers and makers.*”

*LAMA is a cooperative that designs and realizes solutions to tackle change successfully. In the OpenMaker Project, we are facilitating the community building process of the makers and manufacturers communities, starting from our local accelerator, physically based in Impact Hub Florence, but with the aim of engaging as many cities of Italy as possible, including Milan, where this event is taking place.*

*That’s why, together with our partner TOPIX, we organised the event with three of the most important Makerspaces in Milan: Opendot, The Fablab and WeMake.”*

*introduction by*

**Leonardo Camiciotti**

**TOP-IX Consortium**

*“The TOP-IX Consortium, managing the Internet Exchange infrastructure (the reason for its initial foundation in 2002), running the Development Program, and the Streaming platform, has in recent years dealt with some key issues in its field, like Cloud Computing, Open, Big and Social Innovation. We are the Turin accelerator of the project.*

*Through OpenMaker, our will is to strengthen relations between companies and the so called “maker movement”, with physical interaction between the communities through events like this one. This community will then empower its networking potential with the OpenMaker online platform.”*

*introduction by*

**Massimo Temporelli**

**The FabLab**

*The Fablab is a shared digital manufacturing workshop where almost anything can be built using a mix of digital technologies (3D printers, CNC mills, robots, laser cutter, Arduino) and analogue prototype and small series production machines of self-built objects / products. We develop prototypes, smart objects, with digital fabrication.*

*introduction by*

**Zoe Romano**

**WeMake**

*WeMake is a Makerspace with production and prototyping technologies accessible to everyone. We develop prototypes and work with companies and communities, both with training and codesign activities. We are very focused on social impact. We are very interested in being here today, to discuss and discover the best practices and the challenges of the collaboration with the manufacturing sector in the framework of the fourth industrial revolution.*

introduction by

**Enrico Bassi**

**OpenDot**

*OpenDot has been founded by an interaction design studio, and for this reason is a makerspace which developed since its beginnings collaborations with companies. We believe that for a company the innovation can be triggered by the interaction with makers groups and makers spaces; this can give a particular added value in the way project development and design are conceived in a company.*

*We also host educational activities, being node of an international network, the Fab Academy.*

*We try to link the potential of a network, the opportunities of being a fablab, and the needs of companies.*

*Thus, understanding how this can become a sustainable model is one of the reasons we're here for.*



speech by:

**Indy Johar**

Dark Matter, Project 00

**“How do the values of open source, democratic participation and transparency lead us to new productive processes and new organizational forms?”**

*Open Making is not about start-ups. It is about ecosystems of actors, and the challenge with ecosystems is that they need new accounting mechanisms to think about them. Who decides quality assurance? And with quality assurance comes insurance. If you centralize insurance, you start to centralize the system’s capacity to innovate: you can no longer understand the complexity of the demand on their edge of the now. The challenge is not how do you decentralise and control, but how do you give capacity in the license to innovate.*

*Technology allows us to do real-time additive compilation of insurance - if I can insure something I can sell it to a corporate. How do you price in these models? Pricing could be not about intellectual property, but built around insurance, provenance, outcomes. There’s a whole new pricing architecture coming to this economy, which will be radically transparent but also add value in whole different ways to traditional models. Solutions like programmable smart contracts are going to unbundle the corporation as we know it. When programmable contracts will become linked systems, they can become the architecture of large movements of people organizing value in ways we’ve not seen before.*

*The centre of the story is that this is not going to be an industrial revolution, it is going to be a humane revolution. The real opportunity is the capacity for technology and infrastructures to release humanity from bad jobs. Anyone is more powerful than any general artificial intelligence that’s likely going to be created in the next 40 years. So, how do we unlock the human’s capacity?*



A woman with dark hair and glasses is speaking into a microphone. She is wearing a light-colored top. The background is a plain, light-colored wall. The image is partially obscured by a red graphic element on the right side of the page.

**speech by:**

**Patrizia Bolzan**

**Polifactory**

**“The reverse angle  
from practice to policy”**

*Usually the design approach within a University starts from an analytical and conceptual part and then becomes a prototype. We are trying to adopt the opposite perspective.*

*Here is what we have learned:*

- *a community is not enough to build initiatives, but it is required a compact coalition of subjects motivated around the same goal;*
- *innovation is designed better to answer to challenges if it is shared with many actors, and that maker spaces are carries of a new human-centred culture.*
- *industrial policies like Industry 4.0 do not consider makerspace perspectives and distributed production platforms. At the same time these spaces have not been able to act and represent themselves as a third way to develop innovation.*

*We can bring three interesting elements in the discussion:*

- 1. open and distributed production in the regeneration/upgrading of manufacturing process for SMEs and craftsmen;*
- 2. bottom-up innovation perspective on national industrial policies;*
- 3. clear political message on bottom-up innovation: it needs more supportive measures to stimulate the soft component (people and community) than the hard component (machines) of the innovation process.*

*We should enable business to think with their own head, understanding the advantages of distributed and open production, allowing makers and FabLab to be authoritative speakers in talking about digital and open innovation.*

A man with short dark hair and glasses is speaking into a black microphone. He is wearing a dark shirt. The background is a plain, light-colored wall. The image is partially obscured by a red graphic element on the right and a white graphic element at the bottom left.

speech by:

**Marco Sachy**

Dyne.org

**“The relevance of distributed ledgers for the Makers’ community”**

*I will try to answer to the central question of today meeting by explaining the opportunities offered by cryptocurrencies and blockchain.*

*A distributed ledger records transactions in a decentralised broadcasting environment, being more democratic as a system than the “Fiat Money” system, and delivering proper services for makers and more in general for the social good. The potential of this can be to enable a bottom-up way to organise production in a collective fashion, building smart contracts, and use them to manage the supply chain, for lending and investment, for billing and payments.*

*It is possible to build contracts for P2P lending, also at collective level: if you put in a smart contract that 10 people are applying for the same loan to a bank, jumping the credit scoring or the intermediary institutions that now are blocking the access to credit.*

*In Italy you can apply for an IME (Electronic Currency Institute) license with 350 €, to have your own payment processing platform, connect it to the supply chain actors and the SEPA European payment infrastructure. You can create an island where you can operate without the constraints of the conventional banking system.*

*Makers communities can own collectively bitcoins, can create their own crowdfunding platform through smart contracts and use a collective wallet where they can vote with multi-signature.*

## Questions and answers: first session.

**Zoe Romano** One thing that I find difficult in this journey is about the fact that the people working on this have a lot of commonalities, but when we deal with companies that made 30 years business as usual is very hard to share and understand with them what is meant by “value creation”. For example, value for them is about making money, but apart from that is very hard to find a common language. There is a lot of work to do on the cultural side to spread this type of values, and have a shared knowledge on what it means to it mean to create value. Do you have the same experience?

**Indy Johar** If the top global 9 companies must pay for the material economic resources and social resources that they use, they all would be financially unviable. There is a huge amount of social costs that are currently buried in the system. But the focus is not only how to connect with them.

Local Motors, which is behind the Wikispeed project, can produce locally a car in 8 weeks. We should not think this is something small. We can create the conditions for an open economy. I think it’s a macro conversation, not just about how start-ups join up with major corporates.

We are talking about a much more substantial disruption of the economy. If you look at the radical automation that is going to come down the table, I think cities are going to be massive investors in this. Open-source and system scale ethics are going to become powerful in that world. We should create bigger initiatives, do larger things than what we’re currently thinking.

The point is how do you venture a system’s level. I don’t really care about existing corporates. Either they’ll change, or they’ll die.

**Zoe Romano** But in Italy more than 90% of the companies are under 10 people!

**Indy Johar** It's the same also in UK. Or in Germany. Transformation, automatization has started to happen only in the big companies, the middle economy is not transforming. So how do we do that? How are we going to do a massive distributed digitalisation? I think that is about returning micro but hyper-connected economies. This is the craft economy reborn with kind of network capability.

**Aral Balkan** I agree! But there's a third option: the influence of big corporations on institutions, the institutional corruption that we have, like in the European Commission, where a company like Google can spend millions of euros to lobby the policy makers. What sort of risk do you see coming from the immense might of these businesses against decentralised and distributed systems? And moreover: some of the mistakes in regulation of decentralised systems can stifle decentralised systems too!

**Indy Johar** Think about Detroit in the 60s: to reduce risk of centralisation of military productions, big companies like Ford and GE were forced by government to decentralise their production out of Detroit. In that period, big companies had so much power that they did a legislative lock. All the technological things that now we have, were invented been already invented in the 50s, but they were not on the market because government used its legislative power to control bringing in to market because they used their legislative power to control outside forces coming in. After 20 years these walls came down. You're right, there's a kind of discourse around the lock. With Brexit, we've decided to jump off the cliff while everyone else is slowly sliding. We should set a Marshall's plan set of investment to reboot the system, like Corbyn is suggesting. No one in Europe is doing interesting things about the future of Governance.

**Leonardo Camiciotti** In this vision, what could be the DNA of the open innovation model? In which way the policy could stimulate something like the venture capital start up approach, fostering either from the demand or the supply side some systemic investment or offer, through differentiation in each sector involved?

**Patrizia Bolzan** If we can work with institutions, like the regions, like European foundations, we can fund a good approach and we can have information to create a new list of tasks we can adopt in order to resolve this policy problem.

**Aral Bakan** Let's start thinking that we do need not only "open" but also "free" things, in the sense of not building things that can then be closed. How do we think beyond open to protect the freedom of the open solutions? The design of this system should begin with the coherence with the funding model. If the funding model is venture capital, and thus exit, this is unlikely to happen.

**Aral Bakan** Recently I've heard about a couple of innovative approaches that do not go against the system, trying to start from scratch, but figuring how to get something from the system. For example, a hospital created an internal lab and collected ideas from the employers and brought these ideas to the market, giving to the employee some revenue for the idea. They made this mechanism sustainable just by saving money from the traditional process. An intermediate step could be a sort of hybrid model between the existing economic system in which we accept official processes of certification, patenting, etc. according to the law, to create the mindset that will set the basis for a more open approach in the future.

**Marco Sacy** Everything presented here is either within the domain of research funded by public bodies or are individual initiatives. In both cases we are outside the regulatory framework, and we try to influence policy and to create new business models that can be self-sustainable. We should create alternatives that can be viable if the system, in my case the monetary one, implodes. With distributed ledgers the development of innovation has been quicker than the development of regulatory framework. Governments, like in China, can put Bitcoin out of the law. That's one thing, the other thing is pretending that by saying that you switch it off, because a centralised system cannot switch off a decentralised one, firstly because of the efficiency of this latter.

A man with light-colored hair, wearing a dark jacket, is speaking into a microphone. He is positioned on the left side of the frame. In the background, a presentation screen displays the text "Provenance Platform" and "each piece of furniture has a". The overall scene is set against a red background that occupies the right half of the image.

speech by:

**Joni Steiner**

OpenDesk

**“Towards a Local  
Means of Production”**

*In the last years I've been working on OpenDesk, which is about rethinking how we can take distributive manufacturing and build a viable business proposition. OpenDesk is a platform where people submit designs of desks and furniture. We help them prototype those designs and we publish them on the platform. Then we have a network of manufacturers around the world which you can find through our website by searching in your city.*

*Thus, we decentralise the design, as well as the manufacturing, with a radically different supply chain, increasingly local, social and at human scale. We tried to distribute not only the making but also the aftercare. We've basically built up a network of 600 workshops around the world in these years.*

*With Creative Commons Licences people can play around with the design of the furniture we're giving the code of, so then the challenge is how to attribute property of the developed design, how to trace the heritage of the things, and then distribute the value accordingly.*

*In the future, we would like the platform to distribute not only making but also raw recycled and recyclable materials behind them. Fabric, plastics, wool. We would like to provide a radius of available and relevant materials in each city.*



speech by:

**Aral Balkan**

Ind.ie

**“People farming vs. ethical technology in the Internet era: a question of business models”**

*When I was 7 I started using computers. At that time computers were tools that empowered you, they didn't track you in every movement, store and use information to profile your behaviour. Now we have the web 2.0, where mainframes are at a global scale, and where the servers are Google and Facebook. Google can track you on 70-80% of the web. Facebook started a business model with the aim of having an exit, as venture capitalist's start-ups do. The product is people information, to be sold at the moment of an exit.*

*I'm interested in the next pendulum move: to decentralise this system in the web era. The boundaries of the self today should include the technology we use. In this sense, surveillance becomes an abuse of the self, if we consider ourselves as “cyborgs”. We should thus apply the human rights we already have, to our cyborg self.*

*Ethical technology respects human rights, human effort and human experience. The technology built to respect these things will be decentralised, “zero-knowledge”, free and open. And most importantly, it will be easy to be used. This is the “Ethical Design Manifesto”.*

*I want you to imagine an internet where every person has their own place, not owned by someone else like Facebook or Google and where there is public space, meaning it as the interconnections between individually sovereign nodes.*



## Questions and answers: second session.

**Guillermo Flores** Considering your presentation, what is your position on the blockchain-based solutions?

**Aral Balkan** Blockchain and cryptocurrencies-based solutions decentralise trust, what they not do is to topologically decentralise the structure of a network. A blockchain is a single database. What I'm describing here is very different from a blockchain. If we have a billion people on this system, then the information about them and their activity is in a billion places, not one. Of course, we can layer blockchain based systems on top of it if we need to decentralise trust, and have smart contracts. But the blockchain isn't is that it is not the core of a decentralised network that could replace the internet; it is a layer on top as I see it.

**Guillermo Flores** Data is not on the blockchain in the way they are doing it, in some cases it is used just as a DNS service, they can work for the aims you are presenting.

**Aral Balkan** From a design perspective, the fact of using cryptocurrencies adds a new level of complexity to a system that competes with existing systems (Facebook, twitter) which don't have this complexity. It will be hard to convince people who don't care about the ideological aspects. If you wide the cognitive load of the system, then it is a challenge to introduce it to a larger group of people.

**Indy Johar** Aral, regarding the concept as humans as cyborgs, through their extension of self, another way of looking at it is considering not individuals but rather relationships. And one thing that is interesting is that sovereignty is not about individuals, but about the relationship. If we both are on Facebook, to give access to one conversation we should both allow access. This challenges the notion of individual as a psychological notion of society. Take rights: rights are a top-down allocation from the State. What if it was a personal oath-based mechanism so common law based on individual oaths of reciprocal action which can build a bottom up legal infrastructure like common law 2.0 which would be completely variant on code.

**Aral Bakan** I don't know how you can have relationship sovereignty without individual sovereignty. Beyond this though, if we stop thinking about people as objects, but as individuals that can be hurt, physically and emotionally, individual remain very important. To model any human system without guaranteeing individual sovereignty, and the integrity of the self, would fail to take the welfare of those individuals in to consideration. Our objective should be how to maximize the welfare of the individuals. If you think about the social contract of Rousseau, who should engage in the social contract if we don't have individual sovereignty? If we both are on Facebook, and both cede our sovereignty to Facebook in order to have that relationship there is an entity there that is more powerful than either of us, because it has not ceded any of its authority, control or visibility in to ours.

**Indy Johar** Individual is a synthetic idea, not a universal one. It was born in Italy, the Vitruvian man notion of the idea of individual. The reality is that every individual being is a multitude of organisms, our mind is a social, not an individual construct. Is the idea of individual which creates the notion of sovereignty and supremacy, and meritocracy...  
In the physics of the 70s it was foreseen that interdependency would radically change our noun based language: we have a language failure going on, our language is all based on "subject-noun" orientation and the technological conversation is at the paradigm tipping point of that discourse.

**Elena Como** I'm interested in the health sector in particular: data is very important and sensitive, and to protect them is a very big challenge; while data is very valuable for the common good, so it's good that is produced and gathered, and new tools and platforms help on that. How would you solve this challenge?

**Aral Bakan** One has no right to have access to any sensitive information about me, no matter how useless to society, unless I give you consent.

**Claudia Mastrogiuseppe** I work for the Italian machine builders' association (UCIMU), which is mainly composed by middle-size companies. My question is about production, manufacturing: when I think about makers experience I always think about people working on wood and plastics, as materials. What about the experience that the maker movement had with heavy materials, like metal, iron, steel? Have there been an experience? And if not, why?

**Joni Steiner** We started out using basic plywood deliberately to try and prove a model that is about distributing making and the value of things to many people, and it was natural to start using a very basic technology like CNC cutting and a basic, universal material. What we're seeing is just a test case, and we're very excited about the changes in materials and processes and technologies that are going to come. Hopefully, soon polymers and new kind of materials, which are more sustainable, will be adopted.

**Dario Marmo** This is also linked to the limited access to more costly machineries. Do some of the maker spaces have experiences related to “hard manufacturing”? If not, what are the limits you are experiencing as makerspaces to interact with traditional manufacturers?

**Massimo Temporelli** We don't use very expensive technology, we use very expensive design. We are designers, more than manufacturers. It is important to use this machine in new ways and then to push the companies to buy the expensive technologies. We are a contact point for companies, helping them to transform what they are doing, or the way they are doing it, in something new. We are not the technology hub for companies, we just think design in a new way; with technology, of course!

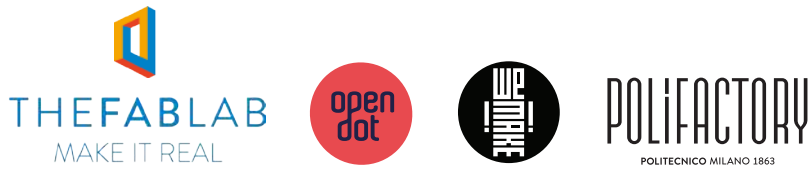
**Zoe Romano** I would divide the type of companies in two classes: on one side there are the companies which are curious, and think about our machines, like 3D printers, as new ways of manufacturing. It's hard for us to deal with them, since in makerspaces digital fabrication is about new processes, that involves distributed manufacturing and the change of the overall system of production. On the other side there are companies that try to open new supply chains, new streams of products, with a new type of DNA, involving more communities and makerspaces within the process. These companies see themselves within an ecosystem, and it's easier to collaborate with them.

**Enrico Bassi** We have to divide the theme in layers. If the question is: is there any technology that can effectively work with more advanced material, the answer is “of course”. Airplanes are already partially 3D printed, with hard materials like titanium. We can talk about the layer of technology, but what we can do is not because of the technology but because of the mindset. With technology you improve only of a few percentage points, like every incremental innovation, while if you look at the entire process and work on the mindset of people then you can have a larger impact. Those things are not one against the other, in many cases technology attracts companies, and then the interaction with us helps company to change also their mindset. We can't start from the technology, because the technology is a tool, it doesn't make sense to drive a change because you change the tool you are using. I think that what's magic in Open Desk is that it creates a model that works, and distribute benefit among all stakeholders.

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