Open Innovation Strategy Pursued by NTT DATA Italy

Giorgio Scarpelli

Abstract

NTT DATA Italy is adopting an open innovation strategy and pursuing collaboration with clients, universities, and startups. The company is focusing particularly on innovation with clients and utilizing an idea management platform called IdeaHUB, where employees with good ideas can post their ideas and gain feedback on them. This article introduces these research and development activities.

Keywords: global, innovation, R&D

1.   NTT DATA Italy open innovation model

NTT DATA Italy is pursuing an open innovation strategy aiming to master the big shift we are experiencing nowadays, characterized by several revolutions—all driven by technology—that are happening together at the same time.

Innovation is not just related to ideas, as ideas that just stay in labs or universities are not innovation, they are just ideas. Innovation is more complex. It is the way we bring ideas to reality, turning ideas into something real and useful, failing and retrying, starting from a need and finding an answer. The capability to turn creativity into reality is the key to make the most from innovation, but everything starts from ideas, and in a hyper-connected world, both ideas and capabilities are everywhere. For this reason, we are committed to finding ideas and niche capabilities to turn into reality and bring to the market.

Therefore, innovation is the capability to transform ambitious ideas into tomorrow's solutions. It involves technology and research and development (R&D), of course, but includes much more: intuition, vision, ability to execute, all supported by passion and courage. All of this is expressed in an ecosystem that values perspectives and approaches outside our comfort zone.

This capability is substantiated by the network of relationships, collaborations, and shared efforts that produce the ideal context to imagine new things and find the support to realize them. Such a network of relations is what we call *open innovation*, a kind of distributed collective genius in which several stakeholders, including customers, are part of. By offering our customers the possibility to actively enter the ecosystem and to enable direct and indirect collaboration with universities and startups, in addition to our internal capabilities and labs, we make our open innovation model a key business enabler. We call this the Innovation Empowerment Model (**Fig. 1**).
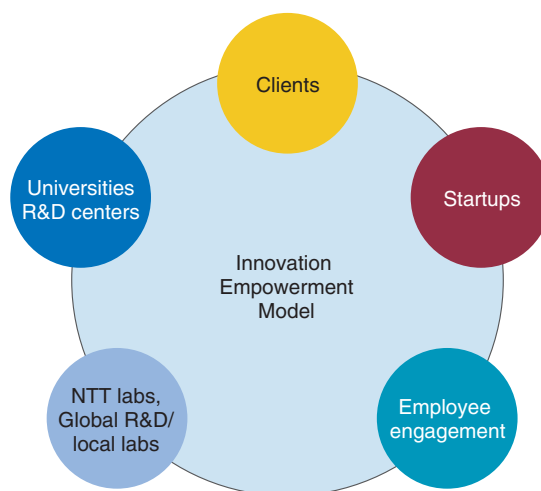

Fig. 1.   Innovation Empowerment Model.

Politecnico di Milano
Humanitas University
University of Milano-Bicocca
POLI.design

– IoT
– Blockchain
– Experience design
– Sport medicine

University of Turin
University of Eastern Piedmont
A.O.U. Citta della Salute e della
Scienza di Torino

– AI
   Applied to automotive,
   insurance, healthcare sectors

University of Pisa

– Synthetic reality
   Immersive experience
– Robotics
   Industrial / Healthcare
– Cybersecurity

The University of Naples Federico II
Parthenope University of Naples

– AI
   Image recognition
– Cybersecurity

CUOA Foundation
University of Bologna

– Experience design
– Emotional technologies
– Blockchain

Sapienza University of
Rome
Roma Tre University

– Cybersecurity
– AI
   OCR /
   Dematerialization

University of Calabria

– AI
   Machine learning / Deep
   learning
– Blockchain
– IoT / Embedded systems
– Precision life science

Milan
Treviso
Turin
Pisa
Rome
Naples
Cosenza

AI: artificial intelligence
IoT: Internet of Things
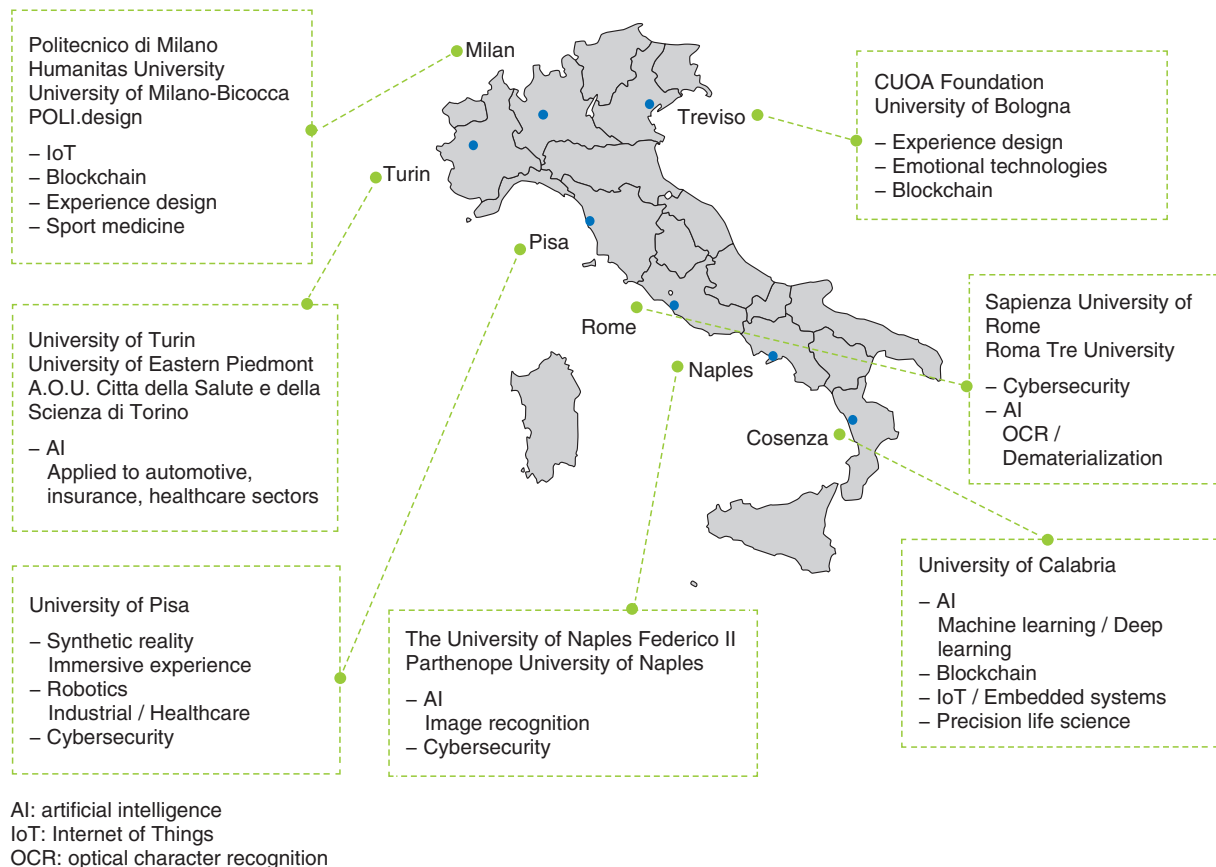OCR: optical character recognition

Fig. 2.   Collaboration with universities in Italy.

2.   Collaboration with universities

Universities represent one of the main actors in the open innovation ecosystem. Maintaining relations with them is one of the most relevant success factors in our strategy, for several reasons:
- Being connected with talented resources
- Accessing cutting edge research
- Receiving information on future technology scenarios
- Being in contact with spin-off and startup incubators that are often based close to the university context

We have experimented with several modalities to collaborate with universities, each characterized by a different level of complexity, such as:
- Degree thesis and internships in domains of interest for NTT DATA
- Ph.D. studies in relevant industry fields
- Open Labs using NTT DATA technologies
- Public funding partnerships

- Post-graduate master's degrees

We are leveraging the presence we have in the entire Italian territory to strengthen collaborations with the local university ecosystem, focusing each area on a peculiar innovation domain (**Fig. 2**).

3.   Collaboration with startups

The network of relations that enables the open innovation model gains great value from the startup ecosystem, whose effervescence fuels our capacity to grow while leveraging innovation. The *startuppers* have dreams on which they bet their lives, which are rooted in their passions, which stimulate their ambitions, on which they feel and want to become number one. This is why ideas coming from the startup ecosystem are often the most brilliant and most visionary. However, the startuppers need a travel companion who shares the same spirit who can help them to direct their energy, in order to examine all the aspects necessary to compete in the market. This travel
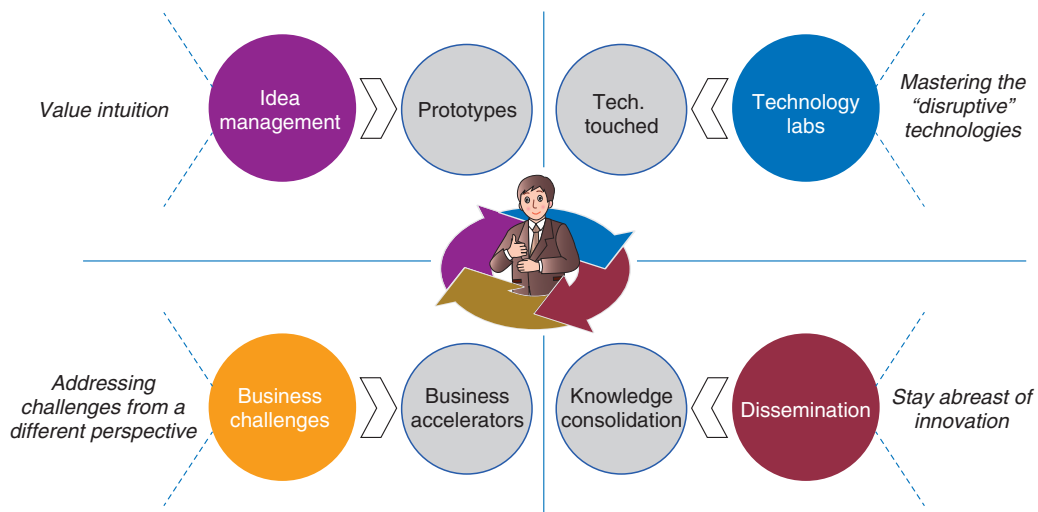
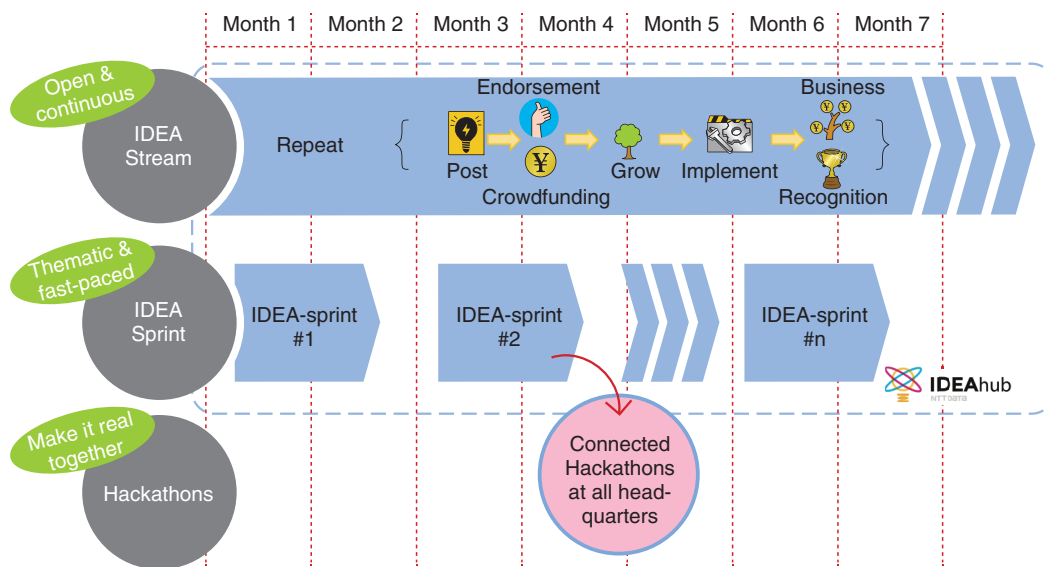Fig. 3.   Co-innovation with clients.

Fig. 4.   IdeaHUB.

companion will also complement the strength of the startupper's enthusiasm with experience and maturity and look at projects with the realism of one who is familiar with the dynamics of the market.
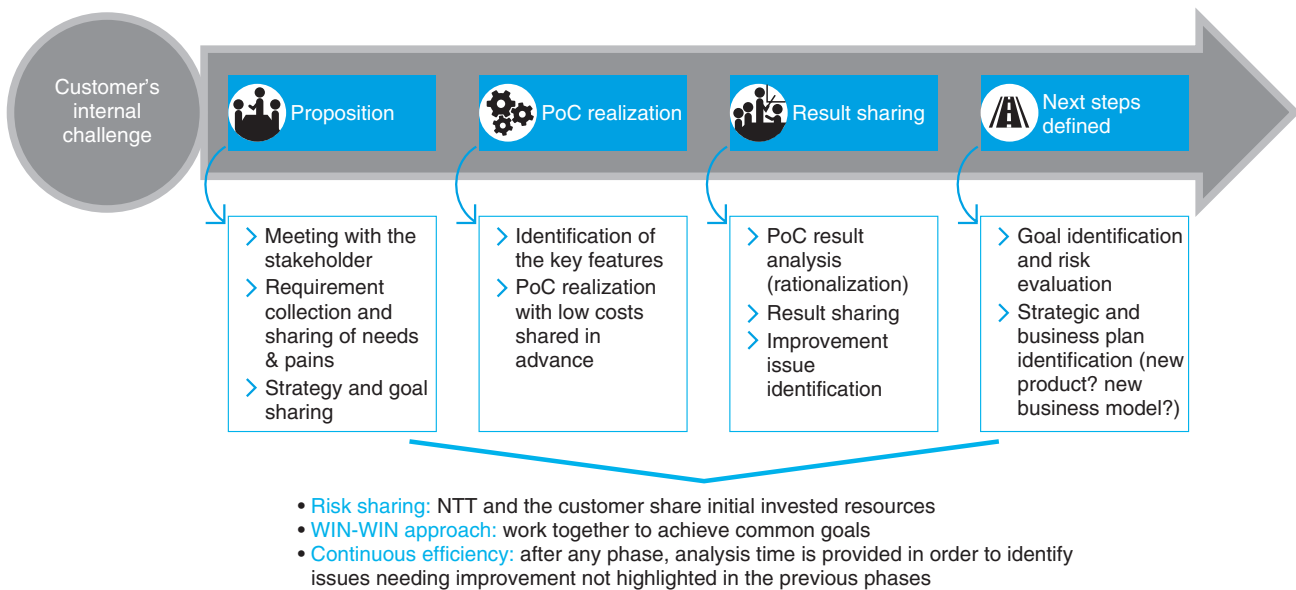
We are interested in startups for the ideas they can generate, which are enhanced with a long-term project that creates value because it has value in the market. In the last year, we started several collaborations with about 15 startups to explore concrete business opportunities, including some outside Italy, in Europe and Japan.

4.   Co-generating innovation with clients

We export the open innovation model to our clients, providing them with a way to respond to their needs for innovation, for whatever reason they have (**Fig. 3**).

To give value to our intuitions, we utilize an idea management platform called IdeaHUB (**Fig. 4**) that permits anyone who has a good idea to post it and

Fig. 5.   Design thinking and quick prototyping methodology.

- Risk sharing: NTT and the customer share initial invested resources
- WIN-WIN approach: work together to achieve common goals
- Continuous efficiency: after any phase, analysis time is provided in order to identify issues needing improvement not highlighted in the previous phases
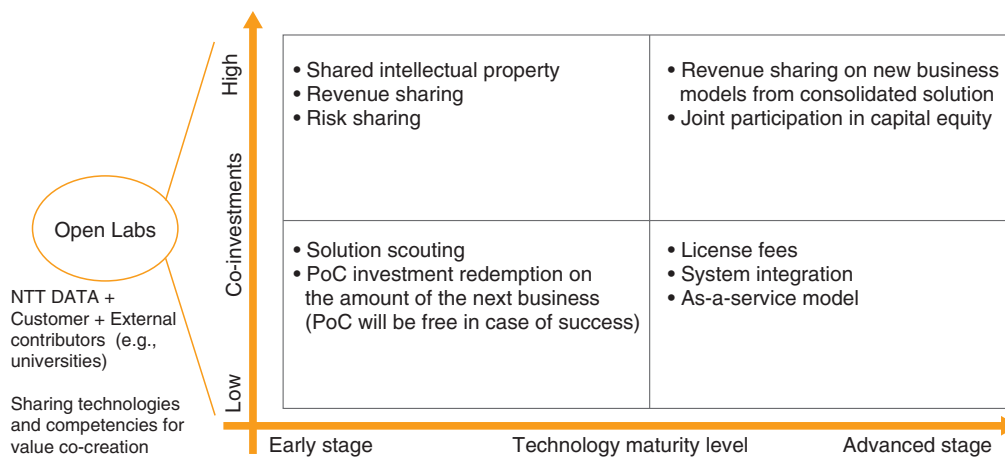
PoC: proof of concept

Fig. 6.   Open Technological Labs and collaboration model.

gather opinions on it. IdeaHUB is utilized both for fueling internal idea generation and as a service to support our clients with their external challenges. IdeaHUB can also be used to manage *ideackathon* (idea + hackathon) initiatives and special challenges and competitions.

When our customers ask us to help them solve their challenges, we propose a methodology based on a *design thinking* approach to understand the problem and a *quick prototyping* approach that gives the pos-sibility to actually touch the technologies while limit-ing the costs of trials (**Fig. 5**).

Technologies that have the potential to solve a busi-ness challenge or disrupt the business posture of our customers can be jointly experimented on within Open Technological Labs, which are physical/virtual spaces where we can touch technologies with our hands. We propose a collaboration model character-ized by a level of co-investment that depends on the maturity level of the involved technologies (**Fig. 6**).

Fig. 7.   Consolidating knowledge and making it accessible.

As part of the co-innovation model, we provide services for consolidating knowledge and making it accessible (**Fig. 7**). Such services are centered on analyzing market trends and providing a vision of technology trends while maintaining a specific focus on the business concerns of our customers.

As a member of a large multinational company with a presence in over 50 countries, NTT DATA Italy can guarantee the support of the most valuable initiatives thanks to the value of our brand and the credibility that we can provide to our partners, even beyond Italian borders.

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Senior Vice President, Head of Innovation, NTT DATA Italy.
Giorgio Scarpelli holds a degree in mathematics from the University of Calabria. His current position is Chief Technology Officer and Head of Innovation at NTT DATA Italy. Among his goals are to promote innovation trends in the Italian market and to contribute to NTT DATA's global R&D strategy by collaborating with NTT DATA Corporation in Japan.
He is the scientific director of the R&D project concerning End-User Protection within the Cyber Security technological district, one of the biggest initiatives on this topic in Europe. He has also worked for companies in the IT field such as Bull and Value Team. In 2001, he was one of the founding members of VP Technologies, a Value Partner Group's specialized brand in security. Before that, he was the head of the South Europe technical support team for security products at Bull/Evidian Company. His main areas of interest are innovation, network and information security, and leading-edge technologies.