Open Innovation, una dimensione moderna per la collaborazione in ambito Ricerca & Sviluppo tra imprese e centri di ricerca

Massimiliano Alvino
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The innovation lifecycle

Open Innovation is a pillar of an existing Innovation Management process
The new innovation equation

Why open innovation is required:

- Shorter time to market
- Narrower space for (disruptive) innovation
- New disciplines and lack of competencies
- Non core technologies
- Open to new markets
Open Innovation

First, it’s a cultural revolution!
The innovation funnel

The aim of any product or process development project is to take an idea from concept to reality by converging to a specific product that can meet a market need in an economical, manufacturable form.
Open Innovation 2.0 the network

The **Triple** Helix innovation model focused on university-industry-government relations.

The initial model was based on simple university-industry partnerships.

The **Quadruple Helix** embedded the Triple Helix by adding as a fourth helix the ‘media-based and culture-based public’ and ‘civil society’.

The current **Quintuple Helix** innovation model is even broader and more comprehensive by contextualizing the Quadruple Helix and by additionally adding the helix (and perspective) of the ‘natural environments of society’.
Open Innovation - Types

**Outside-in**
Integration of/with external sources of competencies
Model *Want-Find-Get-Manage* (WFGM)

- *(W)* Desired from the Company to achieve growth targets
- *(F)* Look outside of the Company for the desired
- *(G)* Contractual access to the desired
- *(M)* Management of the open innovation relationship

**Inside-out**
Granting external use of ideas and internal innovations

*Revelation* (indirect return)
- Free sharing of skills and/or innovations without direct correspondence of financial returns(*F*)
  Look outside of the Company for the desired

*Commercialization* (direct return)
- Transfer of skills and/or innovations through sales or licensing
# Open Innovation – Interaction models

## Challenge
Competition with pre-determined expiration and reward

- **(W)** Clear requirements
- **(G)** Pre-defined and non-negotiable contractual terms

## Open submission
Continuous acceptance of proposals to be evaluated

- **(W)** Generic requirements
- **(G)** Negotiable contractual terms
- **(M)** Management to be defined based on the agreement

## Scouting
Discovery and detection of competencies and innovations

- **(F)** Direct research
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Front-End of Innovation

Promotion

Ideation → Maturation & Screening → Strategic Selection

Feedback

Normal development and lifecycle process

New Product Development → Commercialization → Product/Process Optimization → Retirement

Idea Management

Innovation Management

Product Lifecycle Management (PLM)

Ideate → Select → Validate

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Innovation management is not only R&D and technologies but embrace organizations, processes and products.
Technology Roadmapping

MGTP
An Integrated holistic vision of product and technology development

- Project Planning
- Product Strategy
- Customer Technology session
- Competitive assessment
- Enabling Facilities
- External Knowledge
- Enabling Technologies

Multi Generation Technology Plan – 3 years outlook
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- A «Crowdsourcing innovation» initiative involving O&G Engineering & GRC communities
- Technology themes aligned with Blueprint

Innovation Forum

- IR&D deck defined from selection of best proposals and available budget
- Proposals are aligned with MGPP inputs

IR&D Deck

- All IR&D successfully completed are promoted to NTI/NPI, proposed in MGTP or included in design methodology

Innovation Research and Development Funnel – (Internal/External)
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Open Innovation Club
by Regione Toscana

Breaking Company boundaries – (External challenges)