OPEN INNOVATION AS KEY TOOL FOR IMPLEMENTING CIRCULAR ECONOMY BASED SOLUTIONS

Marta Macias Aragonés – Business development consultant
Technological Corporation of Andalucía (CTA)
Index

1. What is Open Innovation? Why is it needed?
2. How is it implemented?
3. Open Innovation in the raw materials and circular economy areas
4. Conclusions
1. What is Open Innovation? Why is it needed?
Current situation

➢ **Innovation is** not an option anymore but **a need** to keep industrial competitive advantages and survive

➢ **Market changes** faster than the R&D capacity of departments to create innovations

➢ The **competition in R&D projects is higher**, being harder to obtain public funding, making a must to improve innovation projects profitability
Current situation

➢ **Innovation is** not an option anymore but **a need** to keep industrial competitive advantages and survive

➢ **Market changes** faster than the R&D capacity of departments to create innovations

➢ **The competition in R&D projects is higher**, being harder to obtain public funding, making a must to improve innovation projects profitability

New paradigm of innovation

➢ Better effectiveness
➢ Better efficiency

OPEN INNOVATION
What is Open Innovation?

“Your R&D department is the best of the world”

vs

“The world is your R&D department”

“A paradigm where firms can and should use external ideas as well as internal ideas, and internal and external paths to market, as the firms look to advance their technology”

The key to Open Innovation is to understand innovation as an open system in which internal and external actors of the organization take part
**Internal Innovation**

➢ Very limited by **available resources** ($ and people)
➢ Limited by internal know how and technology availability
➢ **R&D department and the rest of the organization** may **collide** in cultural and organization aspects
➢ In some cases, there is a lack of motivation because of the **invisibility** of R&D results

**Open Innovation**

➢ **No limitation** because of resources availability
➢ Openness to **multidisciplinary** know how through startups
➢ **Access** to disruptive technologies
➢ **Wider scope**, no restrictions due to objectives, culture or internal policies
➢ **Extra motivation** (“we want to change the World!”)
Why is Open Innovation essential?

❖ No business can invest the equivalent to **hundreds of teams** working on the latest, trending technologies (even Apple, Pfizer or Amazon)

❖ No business can **cover every innovation fronts** of all the areas of its sector/market

❖ Only businesses that use massively Open Innovation for their R&D are maintaining their **competitive advantages in long term**, like pharmaceutical and technology companies

Open Innovation allows to take advantage of the best of internal innovation combining it with the external one, producing results exponentially
Added value

Many advantages are offered by an Open Innovation Program:

- **Efficient access to innovation**
  The organizations can avoid starting new investigation all over.

- **Acceleration of the innovation**
  Reduction of creation cycles, shortening the “time to market”.

- **Cost reduction**
  Mostly in the idea generation phase, including the development phase.

- **Talent search**
  Companies are able to identify and attract human capital.
Added value

Many advantages are offered by an Open Innovation Program:

- Identification of **new business opportunity and access to new markets**
- **Improvement of the company network**: restructuration of the external relationships of the organization, new collaboration frameworks
- **Increase of staff internal motivation** (creativity, proactivity, training, etc.).
- **Improvement of brand positioning**
- To sum up, **BETTER COMPETITIVE POSITION**
2. How is it implemented?
Open Innovation application fields

Open Innovation services application fields

- R&D: 78.1%
- Design: 50%
- Business development: 56.2%
- Marketing/Sales/Branding: 62.5%
- Customer service: 32.8%
- HR: 34.4%
- Market research: 60.9%
Open Innovation tools

Classification of OI tools by cost of capital, time frame to obtain results, degree of integration and phase of innovation

Source: IESE
Firms adopting Open Innovation approaches

facebook  AMADEUS
Sacyr  amazon  P&G
Correos  endesa  REPSOL
Apple  enagás  vodafone
Google  Telefonica  LEGO
DHL
Some key figures

➢ WAYRA – The OI programme from Telefónica  
  ❖ It has already involved more than 400 start-ups  
  ❖ 100 of these start-ups are directly working with Telefonica in joint developments  
  ❖ +160 mille invested with 1.200 mille from other investors/business angels triggered

➢ Biopharma industry: according to a Deloitte analysis, there is a three-fold probability of success when drugs are sourced via Open Innovation

➢ Through the InventionQuest™ contest, STAPLES was able to obtain over 8,300 idea application submissions
Open Innovation nowadays

Companies all around the world are strongly linked to the main, worldwide focal points of innovation and entrepreneurship to face strategic issues.
Corporate venturing is one of the most known approaches of Open Innovation, which coordinates the creation of corporative hedge capital funds, enterprises accelerators and business incubators.
3. Open Innovation in the raw materials and circular economy areas
OI players in the raw materials field

Strategic partnership

➢ **VALE**, Global opportunities page: publication of calls for proposals to be answered by employees and external organisations

➢ **ANGLO – AMERICAN**, FutureSmartTM: forum, including suppliers, research groups and companies from other industries

➢ **LKAB**: collaborative technology development with equipment suppliers

➢ **TATA Steel**, Technology Challenges Gallery: they post specific opportunities and challenges and to date they have had over 380 proposals and are actively working to develop a number of these with the proposers
OI players in the raw materials field

Challenge prize:

➢ **Goldcorp**: exploration problems and proprietary data are systematically disclosed to get ideas and solutions from outside the company

➢ **Ontario Mining Association (OMA)**, MINED Challenge: OMA partnered with Ontario universities to solve industry challenges, drawn from OMA members real-life mining operation scenarios. Individual/teams of undergraduates competed to offer the best concept

Licenseing:

➢ **SANDVIK**: challenges are posted at SANDVIK website. Submission criteria specify that ideas should preferably be in the form of a granted patent or published patent application
PROMETIA stakeholder consultation

➢ 60% are above 100 mill EUR turnover

➢ 86% conduct R&D activities (with an allocated budget above EUR 5 mill in 70% of the cases)

➢ **More than 70% of the organisations follow a dual approach**: externalizing part of their R&D to bring in competences they do not have and internally + internal R&D dept.

➢ **Some companies that make a practice of looking to bring in outside IP and technology have stated that they do not know what Open Innovation is**

➢ Most **common actions are: strategic partnerships and sharing resources**, being these usually implemented together

➢ Most sought partner is **Academia**
When asked to prioritise the approach to be implemented through an Open Innovation service, most selected options were:

- Strategic partnerships
- Sharing resources
- Challenge prize
- Corporate accelerator

Most relevant question within the survey was “Would you be interested in implementing (or improving) open innovation actions in your organisation?”

~70% of consulted organisations answered yes
4. Conclusions
Conclusions

❖ Open Innovation (OI) is a powerful tool for increasing organization competitiveness thanks to joint cooperation, involving the whole innovation ecosystem
  ❖ Quick way to solve challenges (e.g. circular economy related ones)
  ❖ There are a lot of strategies, find the most suitable for your organization!
❖ Some industries from the raw materials sector are already implementing OI
❖ Others are still unfamiliar with OI strategies. However, most of them are already doing OI actions without calling them OI as such, mainly strategic partnerships
❖ When asked about willingness to implement or improve OI strategies, 70% of consulted companies answered positively
Join us and participate in ERAMET’s Open Innovation challenge

❖ ERAMET, with the support from PROMETIA, will launch a challenge prize as an OI action
❖ Innovative ideas will be sought, participate and submit yours!
❖ Joint cooperation and process development is expected

Stay tuned for more information and launching event date!
Thanks for your attention!

Technological Corporation of Andalucia (CTA)

Marta Macias Aragonés
Business Development Consultant
marta.macias@corporaciontecnologica.com