INNOVATION DUE DILIGENCE -
METHOD TO ANALYZE THE MARKET POTENTIAL OF YOUR INNOVATIVE IDEAS!

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Research Institutes of Sweden
DIVISION ICT
SME Development
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- Master in chemical engineering
- PhD in polymer technology
- 7 years’ experience of coordination and project management in research- and innovation projects within RISE.
- Substantial experience from multidisciplinary innovation projects with partners from both industry (SME and larger companies) and academia.
- Currently working with the innovation services that RISE offers
Innovation =

New Idea (+ Patent) + Successful Implementation + Value Recognition + Accessibility
Comparison Due Diligence vs. Innovation Due Diligence

Due Diligence
- A company want to invest/buy another company
- Data driven decision based on facts and sound data, fore sighting the future growth trend of the selling company
- DD is performed by an external partner to avoid bias
- Decision made by a management or investor board

Innovation Due Diligence
- A company want to identify their next successful innovation
- Data driven decision based on based on facts and sound data, fore sighting the future market growth of the innovation
- IDD is performed by an external partner to avoid bias
- Decision is made by an R&D board where they have to compare multiple potential innovations
Innovation Due Diligence – Executive summary

- An efficient and comprehensive market analysis method for early innovations
  - Establishing the current state of the innovation
  - Identifying relevant target markets
  - Establishing a full commercialization strategy
- Method developed by LTU Business - RISE the main partner in performing IDD analysis

Early evaluation of market feasibility saving time and money
How do we differentiate good ideas from bad – before spending too much resources on developing them?
Structure will make you avoid many problems

- Not knowing the benefits valued by the customer – but investing money in development anyway

- Not analyzing competitor games, solutions or trends – going blindfolded into war

- Not understanding your market’s size and dynamics- the cake might be smaller than you thought

- Missing the key requirements to be a eligible choice- some things are hygiene factors

- Not understanding the value chain – having a great product but no means of profitably selling it

- Over-developing – market changes while you invest money in “the perfect solution”
1. **Precise description** - What it is and what it does
2. **The need** - Understanding the need of the innovation
3. **Benefits and values** - What benefits does your innovation provide?
4. **Validation and requirements** - Is the innovation validated and what are the requirements for your solution to work?
5. **TRL and CRL-levels** - Measure how mature your innovation is
6. **IP status** - Establish the IPR situation
7. **Competitors** - What are your innovations key competitor solutions?
Step 1: What it is and what it does

**Initial description**

This innovation is a system of mathematical algorithms [YZ] combined with spatial sensors for automatized objective evaluation of performance using a proprioception test on limbs. The system also has an easily accessed interface for performance tracking and evaluation of sensorimotor control.

**Revised description**

A mobile app for measuring and diagnosing foot movement disorders.

What: Product? Service?

Were could it be used? How would use it?
Step 2: Understanding the need of the innovation

What is the problem?
When is the problem experienced?
How often?
How big is the problem?
How spread is it?
How acute is the problem?
How valuable would a solution be?
Who has the problem?
Who has the need?
How many are they?
Where are they?
Step 3: What benefits does your innovation provide?

**What is it?**

**Features**
Actual components and factors within the innovation and business model.

“These tennis shoes are the first to be made out of polymer X and Y”

**What can it do for me?**

**Benefits**
Quantifiable benefits resulted from unique set of features

Increased durability: Shoes will last 3X the number of uses than current best available shoes

**What does that mean for me?**

**Values**
The actual value that consumers get.

Cost per year decreases 50% for average user

X amount fewer trips to shoe vendor
Step 4: Is the innovation validated and what are the requirements for your solution to work?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>What level of proof do you currently have?</td>
<td>What level is required in industry or by customers? Read-up on industry standards needed Test with potential customers</td>
<td>Plan on overcoming the gap Focus tech development/ investments on key figures of merit to be validated</td>
</tr>
<tr>
<td>Externally tested or only in lab-setting?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Step 5: Measure how mature your innovation is

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRL 9</td>
<td>Widespread product sales</td>
</tr>
<tr>
<td>CRL 8</td>
<td>First products sold</td>
</tr>
<tr>
<td>CRL 7</td>
<td>Customers in extended product testing and/or first test sales</td>
</tr>
<tr>
<td>CRL 6</td>
<td>Benefits of the product confirmed through partnerships and/or first customer testing</td>
</tr>
<tr>
<td>CRL 5</td>
<td>Established interest for product and relations with target customers</td>
</tr>
<tr>
<td>CRL 4</td>
<td>Confirmed problem/needs from several customers and/or users</td>
</tr>
<tr>
<td>CRL 3</td>
<td>First market feedback established</td>
</tr>
<tr>
<td>CRL 2</td>
<td>Identified specific needs in market</td>
</tr>
<tr>
<td>CRL 1</td>
<td>Hypothesizing on possible needs in market</td>
</tr>
</tbody>
</table>
Step 6: Establish the IPR situation

Broad definition of IPR:
*The right of a person or company to exclusively use its own ideas, plans, and other intangible assets without competition, at least for a certain period of time.*
Step 7: What are your innovations key competitor solutions?

Internet research (e.g. Google, Industry reports etc.)

Talk to users of similar solutions and products

Use identified competitors to find more competitors, by searching homepage and financial statements for referenced competitors.
### Step 7: What are your innovations key competitor solutions?

<table>
<thead>
<tr>
<th>Main competing solutions</th>
<th>Advantage</th>
<th>Disadvantage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Helicopter</td>
<td>Can carry better cameras (heavier)</td>
<td>Expensive, Not flexible, Not applicable in all areas (indoor)</td>
</tr>
<tr>
<td>Handheld</td>
<td>Established in the market, Easy to use, Cheap</td>
<td>Limited application areas</td>
</tr>
<tr>
<td>Cranes and wires</td>
<td>Easy to use, Established in the market</td>
<td>Limited capabilities, Limited application areas, Not flexible, Investment costs</td>
</tr>
</tbody>
</table>
Step 7: What are your innovations key competitor solutions?

Why is it important to map competing solutions?

<table>
<thead>
<tr>
<th>Know the market</th>
<th>Knowing your competition</th>
<th>Identify the gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>How do the customers solve the problem today?</td>
<td>What are their strengths and weaknesses, benefits and values?</td>
<td>Do there exist a gap in the market, which your innovation can fill?</td>
</tr>
</tbody>
</table>
Key activities and output created

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Benefits</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standardized hardware components</td>
<td>Accessible</td>
<td>Short implementation time</td>
</tr>
<tr>
<td>Cheap hardware components</td>
<td>Affordable</td>
<td>Low price</td>
</tr>
<tr>
<td>Software based measuring method</td>
<td>Reliability in diagnose due to removal of human bias</td>
<td>More efficient and correct rehabilitation</td>
</tr>
<tr>
<td>Plug-and-play system</td>
<td>Easy to use, even by patients</td>
<td>Low barriers of usability</td>
</tr>
<tr>
<td>Adaptable to multiple tests</td>
<td>Possibility to diagnose multiple disorders with the same system</td>
<td>Less need for equipment (lower cost)</td>
</tr>
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</table>

Benefits - value charter
What next?

Formulate hypotheses on key markets to investigate

- Market analysis
  - Understand the lifestyle of the consumers
  - Age and gender group of the individuals
  - Income and spending capacity of the consumers
  - Education and Profession of the people
  - Mentality and thought process of the consumers
  - Social Status

- **Key understandings** and **actionable insights** on target markets and solution feasibility
Main benefits of IDD

- IDD is an efficient and comprehensive market analysis method for early innovations

- Provides a better basis for decisions on what innovations to support in research and commercialization efforts

- Better applications to for example EU-funding programs
DISCUSSIONS!

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