FIREMAN

Framework for the
Identification of
Rare
Events via
MAchine learning and IoT
Networks

D7.4 Draft exploitation plan
v1 April 2020

Overview

1. Consortial Exploitation Plan
2. Individual Exploitation Plans
3. Problem/Business Models

Consortial Exploitation Plan

Consortial Exploitation Plan (CPE)

1. Guideline for general exploitation plan
2. Overview of joint exploitation plan

CPE - Guideline

- Clearly identify exploitable results (knowledge, methods, agreements, networks, technologies) and consider their direct and indirect value and impact for different stakeholders
- Report IPR management both quantitatively and qualitatively (patent applications, licenses, copyrighted/copylefted material, registered designs, etc.)
  - Ensure that patent applications have EU funding acknowledgement and exist on website
- Recognize the barriers and risks for exploitation (actual use of the results after project funding) and counter them with appropriate measures
- Describe concrete measures to ensure that the results meet real needs, and will be taken up by potential users
- Describe the roles and responsibilities of partners in exploiting results or supporting results exploitation by other (intermediate or end) users

CPE - Guideline

- Consider the Stage-Gate model for new business plan
  - Scoping, including assessment of the relevance of the idea, clarification and evaluation of its scope and feasibility in the market and competition context
  - Business case creation, including identification of customer and end-user requirements, product positioning, definition of product specifications, and project scheduling
  - Development, including new product design with preliminary tests with potential customers, and definition of a production plan and a launch plan
  - Testing and validation, including run of tests (in a lab, in the factory, with customers, etc.) and release of product launch scenarios
  - Launch phase, product into market with monitoring of production and quality

CPE – Joint exploitation plan

- Intellectual property protection
- Community building
- Educational training
- Knowledge transfer
- New business creation (spin-off/start-up)
- Open source project contribution
- Standardization
- New R&D project development

CPE – Joint exploitation plan

- Intellectual property protection
  - Preparation of patent applications for new methods
  - Any joint patent application to describe?
- Community building
  - Creation of new scientific communities or contribution to existing ones
  - Any joint new community or contribution to any existing one to mention? Otherwise, see individual exploitation plan (if any)
- Educational training
  - Use of publicly available project results (such as knowledge, datasets, methods, etc.) in training courses and seminars by academic/industrial partners
  - Any joint training course or seminar to indicate? Otherwise, see individual exploitation plan (if any)
- Knowledge transfer
  - Organization of industrial workshops and seminars with main project results by academic/industrial partners
  - Any joint workshop or seminar to comment? Otherwise, see individual exploitation plan (if any)

CPE – Joint exploitation plan

- Intellectual property protection
- Community building
- Educational training
- Knowledge transfer
- New business creation (spin-off/start-up)
  - Assessment of new business cases based on project results
  - Any new joint business case to describe? Otherwise, see individual exploitation plan (if any)
- Open source project contribution
  - Participation of industrial/academic partners in open source projects
  - Any joint contribution to mention? Otherwise, see individual exploitation plan (if any)

CPE – Joint exploitation plan

- Intellectual property protection
- Community building
- Educational training
- Knowledge transfer
- New business creation (spin-off/start-up)
- Open source project contribution
- Standardization
  - Involvement of industrial/academic partners in standardization activities
  - Any joint standardization effort to comment? Otherwise, see individual exploitation plan (if any)
- New R&D project development
  - Preparation of new project proposals based on project results
  - Any joint proposal to indicate? Otherwise, see individual exploitation plan (if any)

Individual Exploitation Plan

Individual Exploitation Plan (IEP)

1. Guideline for industrial partners
2. Guideline for academic partners
3. Exploitation plans from academic partners
4. Exploitation plans from industrial partners

Guideline for industrial partners

- General strategy
  - Focus on main results and their commercial viability
  - Explore new business models including third parties
  - Identify drivers for successful exploitation and consider how they can be harnessed and strengthened
  - Address possible obstacles for exploitation in today's perspective
  - Asses how EU stakeholders can profit from results exploitation
  - Develop a timeline for exploitation in phases after the project end
  - Identify concrete customer needs addressed by the new project solutions and products, and describe ways to quantitatively measure the success
  - Involve marketing, product-management, and sales departments early on in the process
  - If possible, start exploitation of intermediate results already during the project
  - Consider synergies for exploitation with other projects, possibly also funded ones

Guideline for industrial partners

- Economic factors
  - Focus on fast access to the market (if necessary, create new markets)
  - Address the market for exploitation today (market analysis, prognoses, technical developments)
  - Assess the competition for the developed results, in Europe and worldwide
  - Provide innovation in project results, ensure there are advantages compared to competitors

Guideline for industrial partners

- Scientific and technical goals
  - Evaluate the impact of general technological advancement on the exploitation scenarios
  - Focus on non-technical developments (legal aspects, privacy aspects, . . .) and their impact on exploitation

Guideline for industrial partners

- Intellectual property
  - Consider to protect intellectual property, for example, through patents

Plan of SEAT

- Phase 1 (2021-2022): Adaptation and integration of tailor-made algorithms for SEAT predictive maintenance use cases into the SEAT digital production platform/IT domain
- Phase 2 (2022-2023): Integration of SEAT predictive maintenance use cases into the VW Group digital production platform/IT domain for shared use with other brands
- Phase 3 (2023-2024): Assessment of other potential application scenarios of SEAT predictive maintenance use cases

Guideline for academic partners

- Same as for industrial partners plus the following points
- Academic impact and education
- Sustainability
- Technology transfer

Guideline for academic partners

- Academic impact and education
  - Offer seminars, lectures, lab-courses with topics related to the project
  - Use project results to influence and/or improve education and training
  - Contribute to EU research by building scientific communities, organizing or participating in workshops and conferences
  - Attract new researchers and students through the project
  - Get involved in relevant scientific communities

Guideline for academic partners

- Sustainability
  - Make project results available as open-source
  - Contribute to established open-source projects
  - Invest in maintaining the project results after the project ended
  - Plan follow-up and/or new projects and further funding
  - Form new relations during the project and engage with new partners in future collaborations

Guideline for academic partners

- Technology transfer
  - Trigger interest in the industry for project results
  - Ensure that students gain valuable knowledge by their work in the project, which they will take to industry

Plan of all academic partners

- Individual plans to be prepared in case of need
- Phase 1 (2019-2020): Make results available via public repositories as open source code. Organize workshops for opening new scientific communities in the field. Attract new collaborators
- Phase 2 (2020-2021): In addition to phase 1 practices, further extend the findings to postgraduate courses in the different institutions as Summer School. Technology transfer possibility with industrial partner.
- Phase 3: (2021-2022): Cross-sectorial exchanges, further development of proposed solution toward industry. Starting building consortium for further funding via bigger EU schemes.

Problem/business model

Problem/Business Models

- Problem Model Canvas template
- Business Model Canvas template
- Problem models for each use case (TBD by mid-term project)
- Business models for each use case (TBD by end of project)

Problem/Business Models

- Problem Model Canvas template

Context When does the problem occur?	**Problem** What is the root cause of the problem?	**Alternatives** What do customers do now to fix the problem?
Customers Who has the problem most often?	**Emotional Impact** How does the customer feel? **Quantifiable Impact** What is the measurable impact? (Include units)	**Alternative Shortcomings** What are the disadvantages of the alternatives?

Problem/Business Models

- Problem Model Canvas template
- Business Model Canvas template

<table>
<tr>
<td rowspan="2">Key Partners
Required to optimize operations and reduce risks of the business model</td>
<td>Key Activities
Required to support the organization's value proposition</td>
<td rowspan="2">Value Proposition
offered by the organization in the form of products or services to meet customer needs</td>
<td>Customer Relationship
Referred to how the customer interacts with the organization (e.g., through sales and producto lifecycle)</td>
<td rowspan="2">Customer Segments
Identified with different needs and atributes to which the organization tries to serve</td>
</tr>
<tr>
<td>Key Resources
Needed to support the business (human, financial, physical and intelectual</td>
<td>Channels
Through which the organizaation's value proposition is delivered</td>
</tr>
<tr>
<td colspan="3">Cost Structure
Referred to the monetary consequences while operating under the proposed business model</td>
<td colspan="2">Revenue Streams
Achieved by the organization as income from each customer segment (e.g., subscription fees or licensing, etc.)</td>
</tr>
</table>

Problem/Business Models

- Problem Model Canvas template
- Business Model Canvas template
- Problem models for each use case (if any)
  - Problem model of Use Case #1
  - Problem model of Use Case #2
  - Problem model of Use case #3
- Business models for each use case (if any)
  - Business model of Use Case #1
  - Business model of Use Case #2
  - Business model of Use case #3