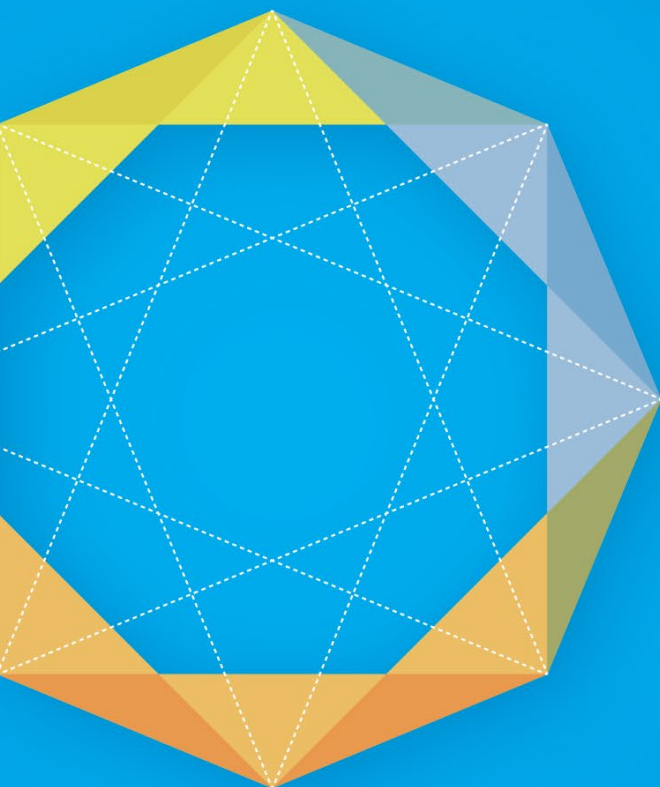




Recommendations and Conclusions of the 12th ETIP SNET Regional Workshop 2021



ETIP SNET

European Technology and Innovation Platform
Smart Networks for Energy Transition



Recommendations and Conclusions – 12th ETIP SNET Regional Workshop

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INTRODUCTION

On 22nd June 2021, ETIP SNET organised its 12th ETIP SNET Regional Workshop. Due to the sanitary crisis, the workshop was organised virtually. While in the past workshops were organised physically with a focus on a specific region, in June 2021 projects from all over Europe were invited to attend the workshop according to 4 themes:

- Theme 1: Market based Energy Systems
- Theme 2: Integrated Energy Networks – focus on storage
- Theme 3: Digitalisation as the Key Enabler: Semantic Interoperability; Protocols; Data Gateways; IoT Integration
- Theme 4: Consumer and Citizen Engagement: Engaging groups and individuals

The 4 themes have been selected based on the research areas of the ETIP SNET Working Groups and the BRIDGE initiative, as well as with a view to contributing to the ETIP SNET Implementation Plans and Road Map.

1. CONCLUSIONS AND RECOMMENDATIONS FROM THE PROJECTS

These recommendations and conclusions have been discussed during the final wrap-up session of the workshop.

1.1 PARALLEL SESSION 1: Market based Energy Systems

The following issues were noted during the first session regarding “Market based energy systems”:

- Importance of regional cooperation and of deploying common regulation (Energy Community area)
- Importance of markets at local level, nested in larger footprint ones. Local Markets are more suitable to cope with local problems (e.g. Congestion Management)
- Network code for flexibility
- Integration of the new TSO role in National Laws
- How to consider grid constraints and cope with them
- Bilateral trading still has a role in pool-based markets
- Evolving role of grid operators and TSO-DSO interaction
- New tools for network monitoring and observability are important
- Third party/private actor roles for some grid services are required
- ‘Supermarket’ concept and new business models
- Demonstration of new technologies such as block chain



1.2 PARALLEL SESSION 2: Integrated Energy Networks: focus on storage

The following issues were noted during the second parallel session on “Integrated Energy Networks: focus on storage”:

- Not uniform and harmonized approach along the EU MSs
- Level Playing field is required across the EU
- Figure of aggregator is central in a market devoted to provide services but it needs a clearer definition
- Duration of administrative process to get authorization can be too long for system requirements
- Long term contract and concessions are needed to cover the investments to deal with changing environment/technologies
- Flexibility services are not really compensated
- It is still required to fully understand the capabilities and constraints for integration and operation of storage systems, especially for batteries.
- Steering wheel of the system (control of operation of storage systems) may be missing because it is challenging to design control systems that are flexible enough to deal with the continuous changes in the regulatory market (e.g. frequency regulation especially considering the great variability across EU)
- For several MSs there is still uncertainty of definition between generation and storage resulting in e.g. double charging
- The environmental benefits come from the use of renewable energy, but the LCA is nevertheless required to fully understand implications for storage technologies across their lifetime.

1.3 PARALLEL SESSION 3: Digitalisation as the key enabler: Semantic Interoperability; Protocols; Data Gateways; IoT Integration

The conclusions on parallel session 3 “Digitalisation as the Key Enabler: Semantic Interoperability; Protocols; Data Gateways; IoT Integration” can be summarised as follows:

- Digitalisation projects are needed to close the gap between ideas and reality (implementation). Projects are the means to implement an idea with interested users.
- Cross-sector data exchange reference architecture (based on the BRIDGE Data Management WG graphics- SGAM based with details): There is a challenge on the level of dimensionality. From ‘Business systems at the top’ down to ‘connectivity to devices at lowest level’. Issues are indicated on how the many layers in-between shall be used.
- Data sharing today is challenging. Especially in the DSO world, standards seem to be missing
- In order to enable people to use the developed solutions, two groups may be considered: small end-users and the DSO/TSO level. Data-based solutions may be useful beyond the energy sector.
- Apparently not everything can be solved in one shot. Thus, Use Cases need to be selected to be implemented (solving sub problems)
- There is a challenge in creating interoperability on top of existing solutions (Federated knowledge bases must be created)



1.4 PARALLEL SESSION 4: Consumer and Citizen Engagement: Engaging groups and individuals

The key conclusions on parallel session 4 regarding ‘Consumer and Citizen Engagement: Engaging groups and individuals’ can be summarised as follows:

- Concerning models to address and meet the needs of entire groups it appears that framing matters (e.g. “energy cells” shall better be called “energy communities”). It is important to organize people without a roof or land to include them in the energy transition. Moreover, it is important to let people experience tangible changes in their neighbourhood, not the least to let them experience mutual appreciation. It is also important to make a distinction among young demographic and seniors. It is also important to look at gaming (how they attract and involve users) and in that sense it may help to let municipalities cooperate on the basis of benchmarks (people like competition).
- Regarding the group dynamics in cooperative approaches, it appears that group games motivate people of all ages and all cultural backgrounds. Dynamic engagement is an ongoing activity. Moreover, it appears that (local) governments can initiate the cooperative approaches, while crafts and small local businesses are catalysts.
- Concerning climate neutrality activities, directives for climate neutrality shall give direction to energy transition. Moreover, there is a need to define more models of participation than just the renewable and citizen energy communities as defined in EC directives. It is also important to involve intrinsically motivated ecologists in the co-creation of new energy systems; they may help finding ways to funnel money for carbon certificates into advanced (local or regional) energy installations. Although local issues are important the bigger (national) structures shall not be neglected.

2. RECOMMENDATIONS FROM WG5 IN TERMS OF “INNOVATION, IMPLEMENTATION IN THE BUSINESS ENVIRONMENT”

The objective of ETIP SNET Working Group 5 is to mobilise experts in support of R&I work in EU to reach the market. It works closely with all WGs of ETIP SNET to utilize projects’ results in support of R&I needs for the years to come.

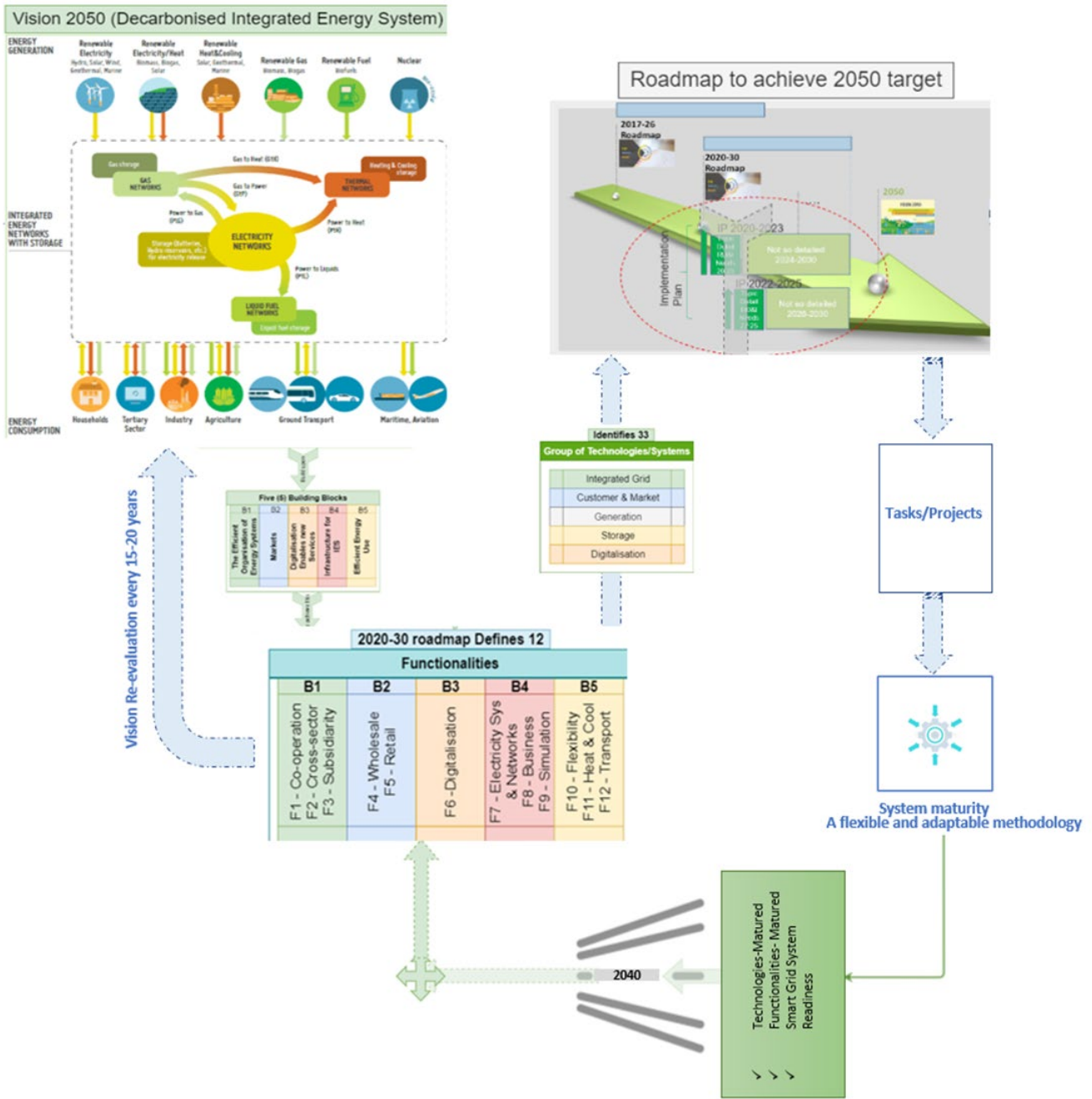
In order to reach this aim, it is essential to have a homogeneity of technology classification and a universal approach that allows to coherently structure and analyse all data coming from projects.

- Build **homogeneity in the analysis** of projects, work done, and lessons learned ⇒ Create a common platform
- Build a universal approach in the taxonomy of technologies that constitute the evolution of functionalities in building the smart networks of 2050 in support of the energy transition.
- Build a methodology to **judge system needs** in the energy transition capable of identifying tangible needs for building on progress made and give feedback to the other WGs for populating their R&I needs in the years ahead;

The results of projects are a valuable source for capturing the maturity of technology evolution contributing to the maturity of the functionalities!

The rolling process as build in the EIRIE platform that is planned to go live early July 2021, aims to help the identification of R&I needs to populate the Ten-year Plan and subsequently the Vision of ETIP SNET.





Purpose of the self-assessment

- **In line with the Innovation Radar assessment**
 - Promoting and showcasing emerging innovations resulting from H2020 projects
 - Bringing together innovative solutions owners and investors/ incubators for facilitating the “go-to-market route”
- **....and beyond the Innovation Radar**
 - Further deep-diving to the innovation and go-to-market enablers of most prominent solutions
 - A variety of new parameters enabling more detailed (self-) assessment and revelation (self-understanding) of:
 - Strong “go-to-market” aspects and enablers
 - Aspects and enablers that need to be further improved and require further analysis and elaboration





- Promote the creation of a business ecosystem, not only for business-ready solutions, but also for promising ones that underperform in certain enabling aspects.
- **What is on for BRIDGE and ETIP-SNET?**
 - A tool to collectively analyse and assess the level of business maturity of certain clusters of technologies
 - Valuable input for fine-tuning Roadmaps, Implementation Plans and WGs/ TFs activities

Key features of the self-assessment questionnaire

- **To whom and prerequisites**
 - R&I project managers/results owners
 - It requires about 30-40 min to go through a digital questionnaire dealing with a wide range of aspects of 'Innovation support to the market uptake'
- **A multiple-choice questionnaire to assess the market uptake process of your project**

In this spirit to meet the above objectives, a questionnaire has been shared with all the projects presented during this 12th Regional Workshop. It is based on three pillars: innovation management, innovation readiness and market potential. The aim is to provide practical advice to projects with a focus on go to market strategy. It will also help the formulation of the Roadmap and Implementation Plan.

The questionnaire consists of 36 questions organised into six main areas covering the innovation facilitation:

1. Technical Description
2. Exploitation
3. Business Planning & Market Competition
4. Context & Ecosystems
5. Investors & Finance
6. Management

All the projects presented during this 12th Regional Workshop have been evaluated according to these six areas and each of them has received a specific score. Results are presented in the visualisations that follow.





2.1 FEEDBACK VISUALISATION: SESSION 1

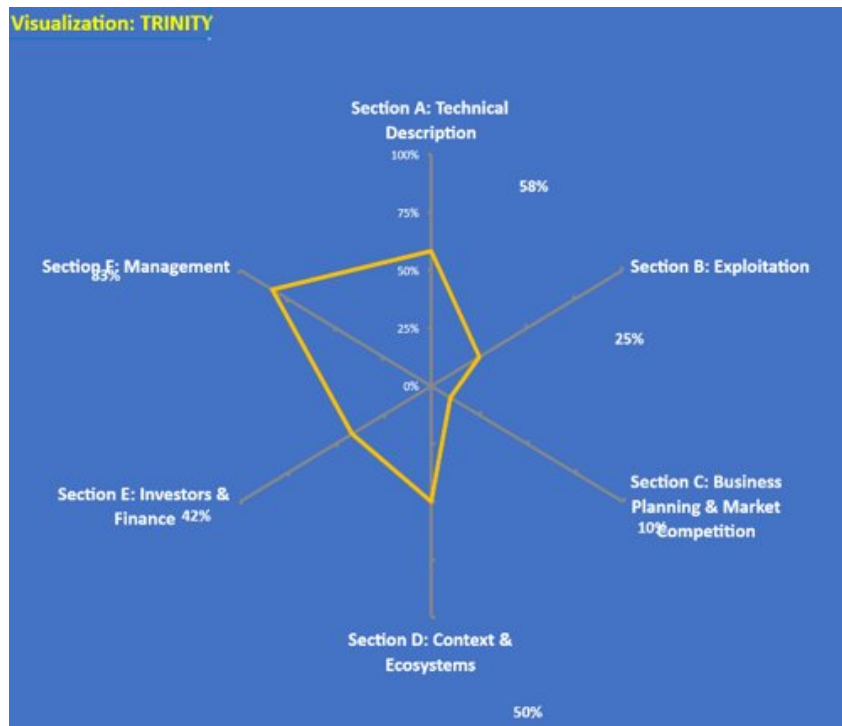


Figure 1: Visualisation TRINITY

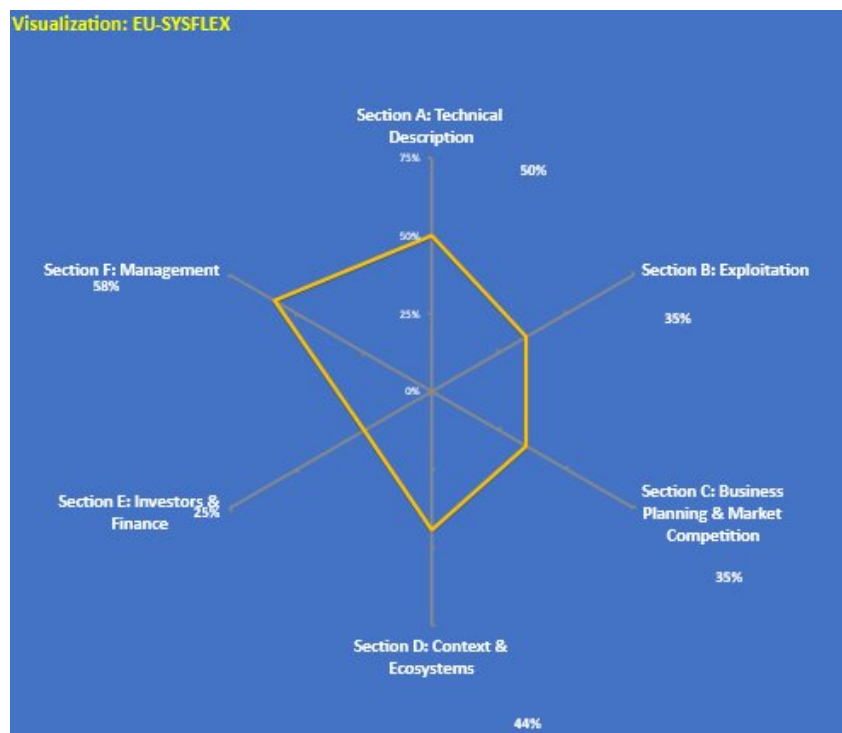


Figure 13: Visualisation EU-SYSFLEX



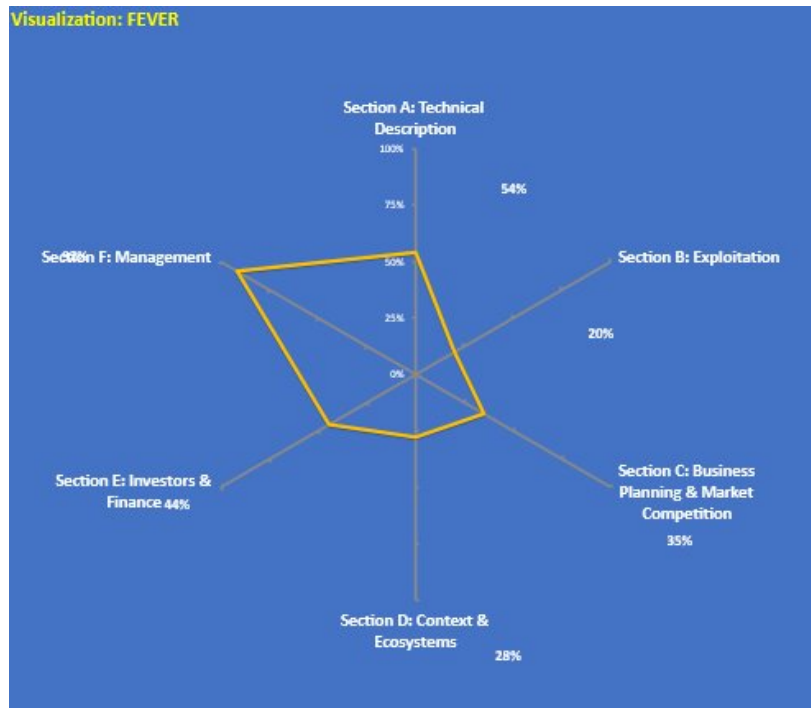


Figure 14: Visualisation FEVER



Figure 14: Visualisation CROSSBOW

2.2 FEEDBACK VISUALISATION: SESSION 2



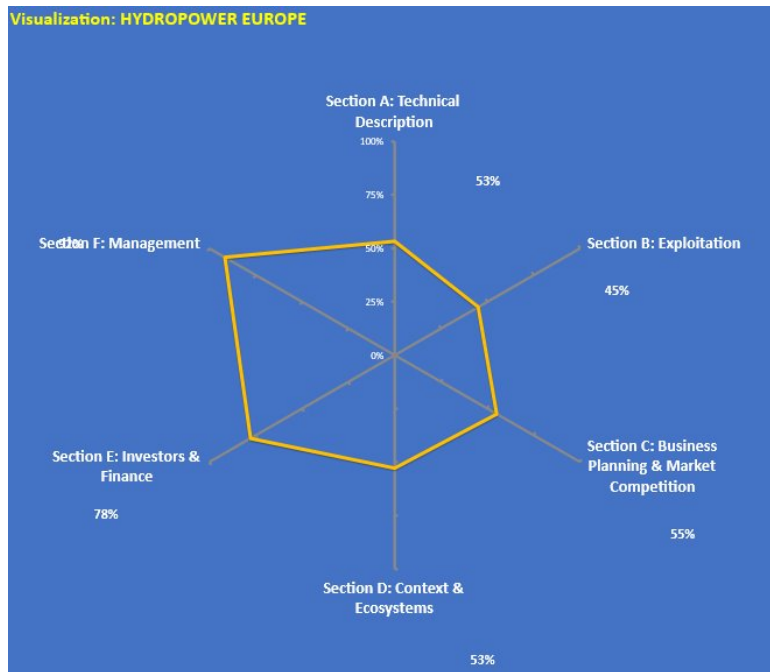


Figure 15: Visualisation HYDROPOWER EUROPE

2.3 FEEDBACK VISUALISATION: SESSION 3

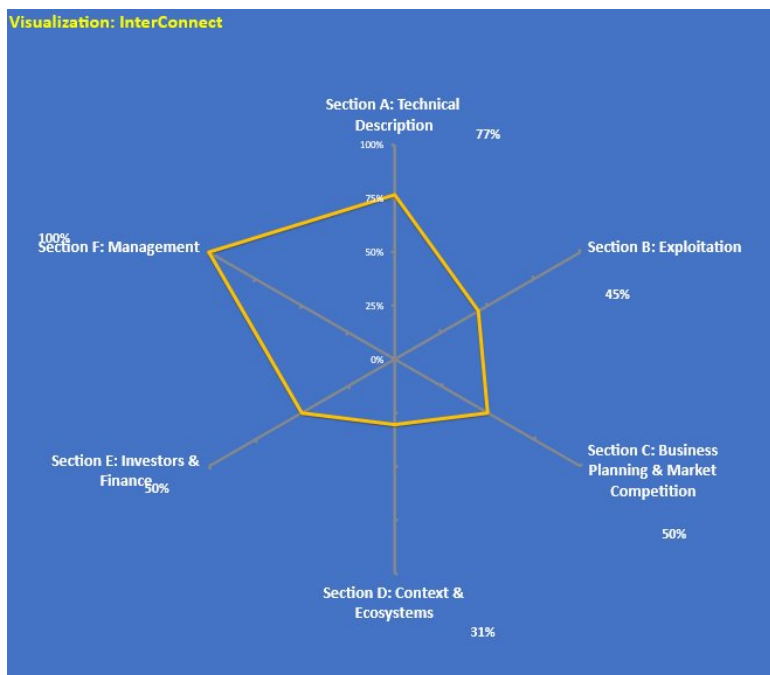




Figure 16: Visualisation InterConnect

2.4 FEEDBACK VISUALISATION: SESSION 4

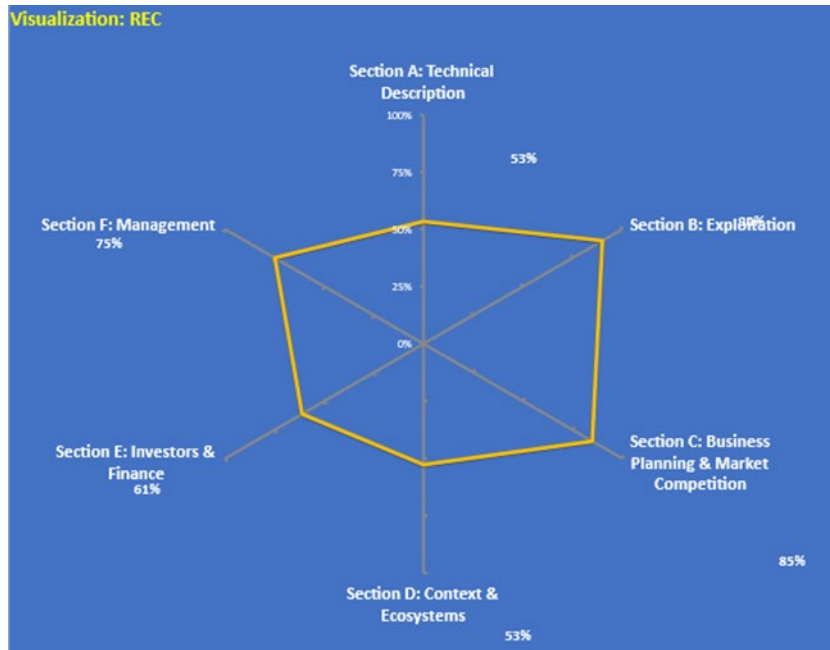


Figure 17: Visualisation REC

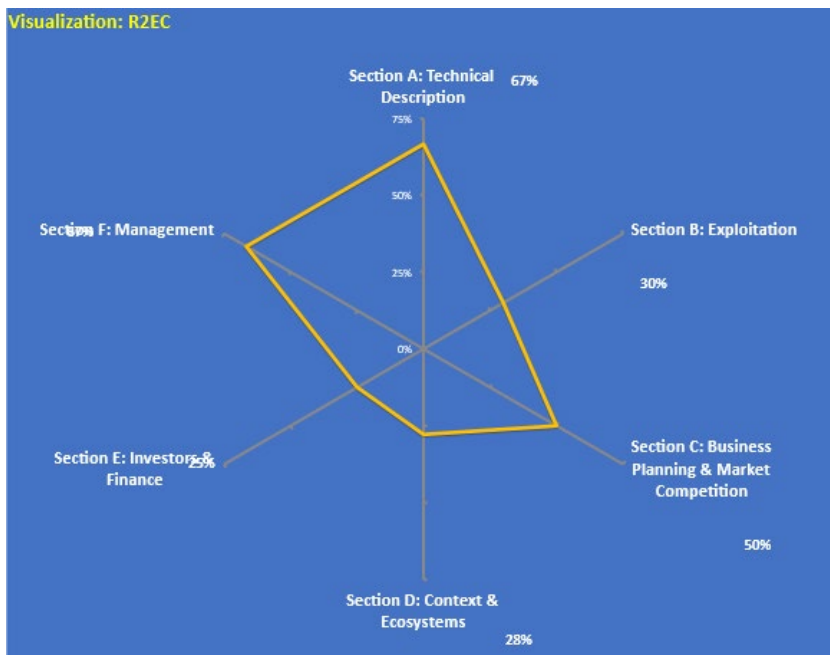


Figure 18: Visualisation R2EC



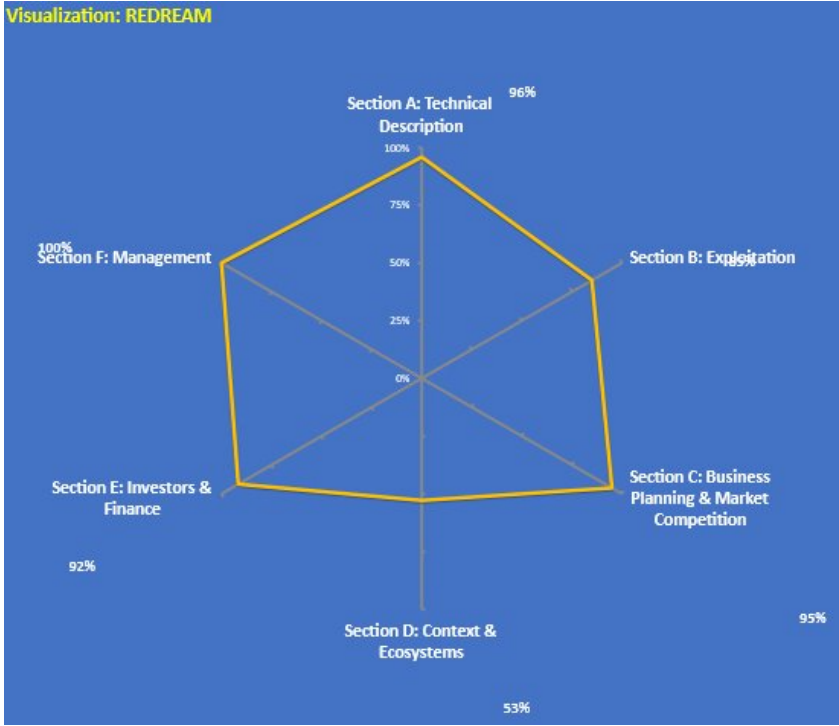
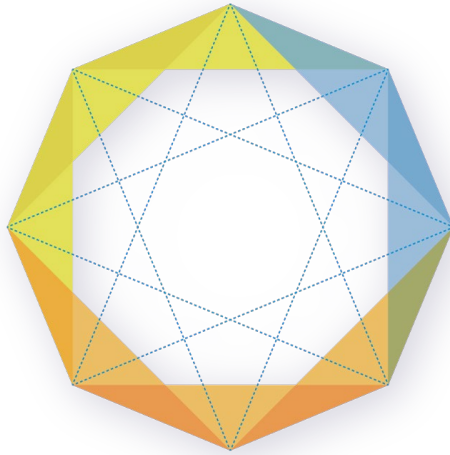


Figure 19: Visualisation REDREAM





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