KAVA Call no. 5
Up-Scaling Projects

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KAVA Call no. 5: Up-Scaling Projects…

Developing, testing, demonstrating innovative technologies, products and services at (pre)-industrial scale

- Time 1-3 years

- Budget; small 0.5-1 M €, medium 1-2M€, large 2-5M€

- Industrial projects – not research (TRL 5 to TRL 7)

Up-scaling projects are here used as full illustrated example; similar considerations for Education, RIS, Internationalisation projects.

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Path: Infocenter/Guidance for Partners/Files/Call for KAVA Projects/KAVA5

2. Project call and selection process

2.1. General rules and guiding principles for Up-scaling projects

- Up-scaling projects are innovation projects based on validated technologies that need additional step(s) for up-scaling, demonstration or implementation. The objective is to bring the technology to market, as a product, service or process.
- The technology must be at Technology Readiness Level (TRL1) of at least 5 at the beginning of the project, corresponding to a "technology validated in relevant environment".
- At the end of the project, the technology is expected to have reached a TRL of at least 7, corresponding to a "system prototype demonstration in operational environment".

- Up-scaling projects must aim for market introduction and/or a commercial use within 3 years (or less) after the end of project.
- Up-scaling projects must aim to have an educational component, for example, including PhD and/or Masters projects, internships, contribution to courses, etc.
- Up-scaling projects are requested to reach a non-EIT/EIT funding ratio of 75/25. Non-EIT funding is the sum of KCA (KIC carried activities) and KAVA co-funding. EIT funding is the requested EIT budget for executing the proposed project. (For explanation of terminology and eligibility of KCA and KAVA Co-Funding, please refer to FAQ (Frequently Asked Questions) version 2017). Co-funding can be contributed only by KIC Partners (not by Task Partners).
- Co-funding contributed by the project consortium should be a minimum of 10-15% of the total funding. Co-funding can be as in-kind contribution. Please refer to your CLC staff for guidance.
- Proposals for Up-scaling projects should demonstrate financial and non-financial backflows to the KIC, as well as contribute to specific KPIs of the KIC.
- The project consortium can include partners who are not EIT RM members as Task partners (e.g. SMEs). Task partners can be eligible for funding up to a maximum amount of €60 K per year (following the H2020 principles of a Third party)
- Specific tasks may be attributed to subcontractors, if the necessity is clearly justified and follows the general H2020 principles
- It is possible to add other partners to the consortium after the project selection, but without changes to the total KAVA budget allocated to the project.

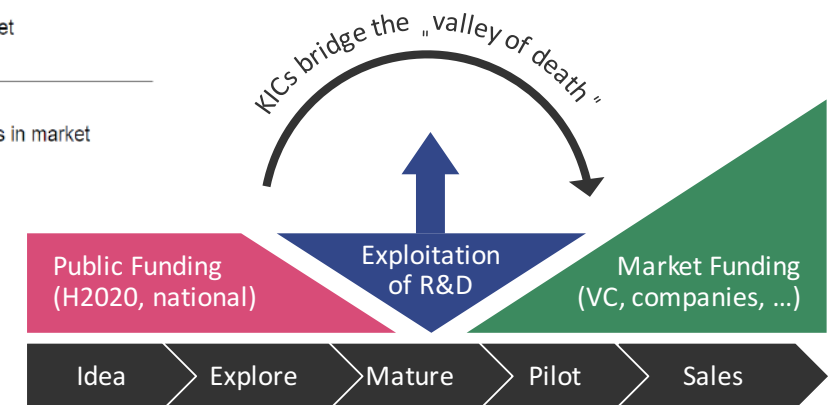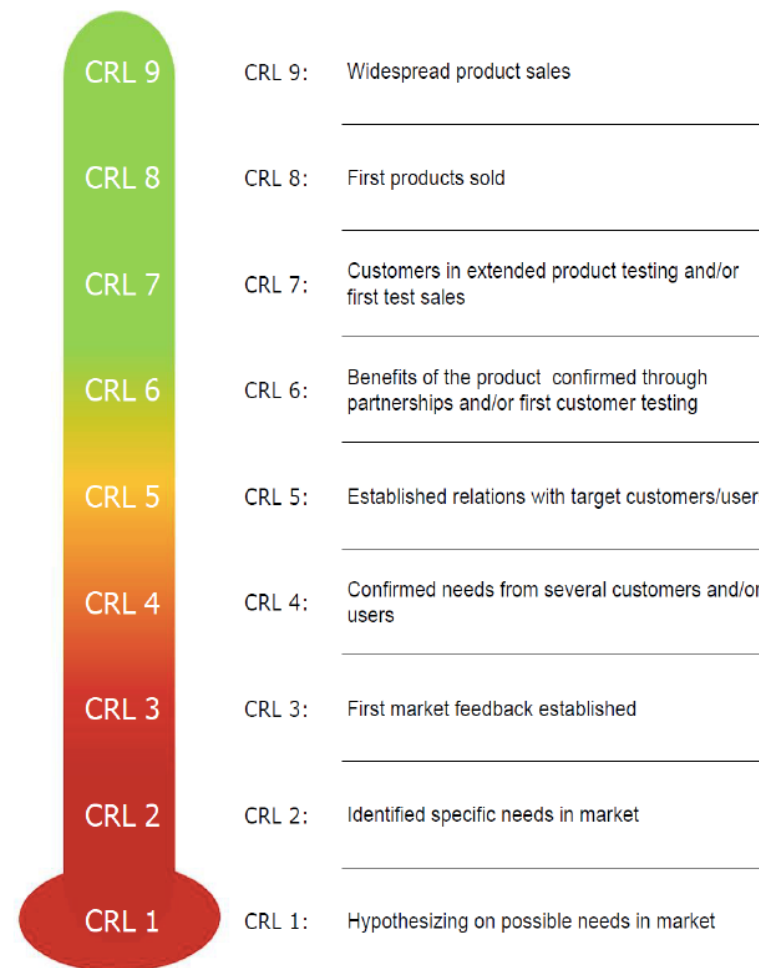# Up-Scaling Projects - General rules and guiding principles

- ☑ • **Innovation** projects **based on validated technologies** that need additional step(s) **for up-scaling, demonstration or implementation**. The objective is to bring the technology to market, **as a product, service or process**.

- ☑ • **Technology Readiness Level** (TRL) of **at least 5 at the beginning of the project**, corresponding to a "technology validated in relevant environment". The technology is **expected to have reached a TRL of at least 7 at the end** of the project, corresponding to a "system prototype demonstration in operational environment".

- ☑ • Must **aim for market introduction** and/or a **commercial use within 3 years (or less)** after the end of project.

- ☑ • Must aim to have **an educational component**, for example, including PhD and/or Masters projects, internships, contribution to courses, etc.

- ☑ • Are requested to reach a **non-EIT/EIT funding ratio of 75/25**.

- ☑ • **Co-funding** contributed by the project consortium should be a **minimum of 10-15% of the total funding.** Co-funding can be as in-kind contribution. Please refer to your CLC staff for guidance.

- ☑ • Proposals for Up-scaling projects should demonstrate **financial and non-financial backflows to the KIC**, as well as contribute to specific KPIs of the KIC.

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Technology Readiness Level – TRL

TRL 9:	Actual Technology system qualified through successful mission operations.
TRL 8:	Actual Technology system completed and qualified through test and demonstration
TRL 7:	Technology prototype demonstration in an operational environment
TRL 6:	Technology demonstration in a relevant environment
TRL 5:	Technology validation in relevant environment
TRL 4:	Technology validation in laboratory
TRL 3:	Analytical and experimental proof-of-concept of critical function and/or characteristics
TRL 2:	Technology concept and/or application formulated
TRL 1:	Basic principles observed
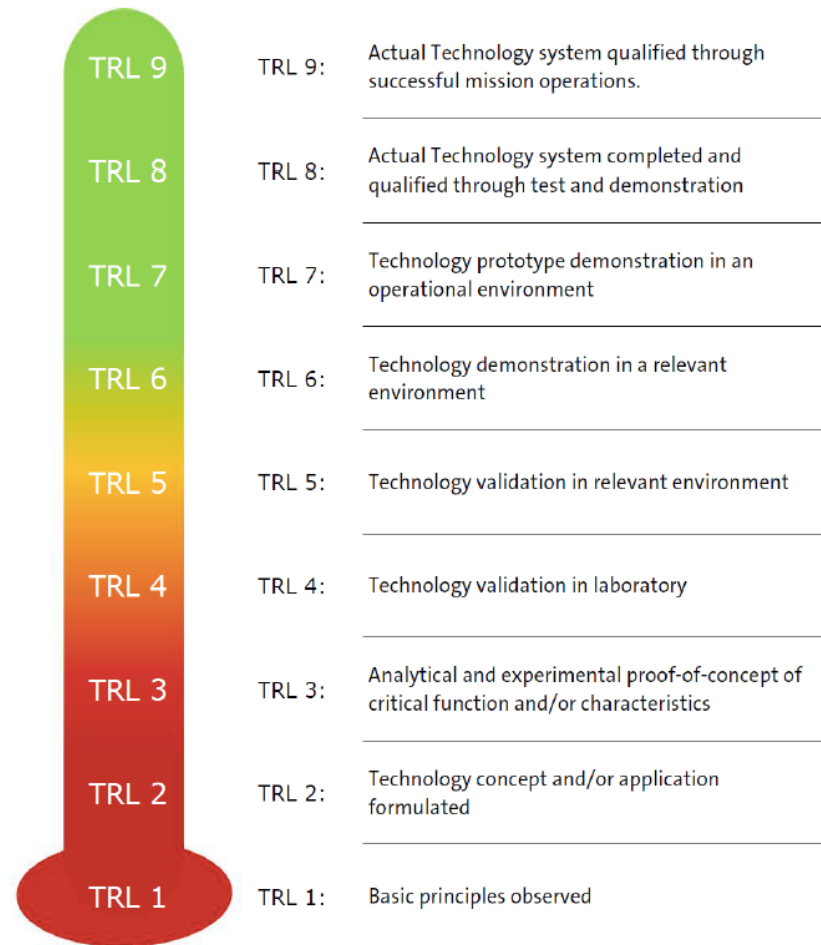
Sources:
EU Commission and KTH

Customer Readiness Level – CRL

CRL 9:	Widespread product sales
CRL 8:	First products sold
CRL 7:	Customers in extended product testing and/or first test sales
CRL 6:	Benefits of the product confirmed through partnerships and/or first customer testing
CRL 5:	Established relations with target customers/users
CRL 4:	Confirmed needs from several customers and/or users
CRL 3:	First market feedback established
CRL 2:	Identified specific needs in market
CRL 1:	Hypothesizing on possible needs in market

KICs bridge the „valley of death"

Public Funding (H2020, national)

Exploitation of R&D

Market Funding (VC, companies, …)

Idea | Explore | Mature | Pilot | Sales

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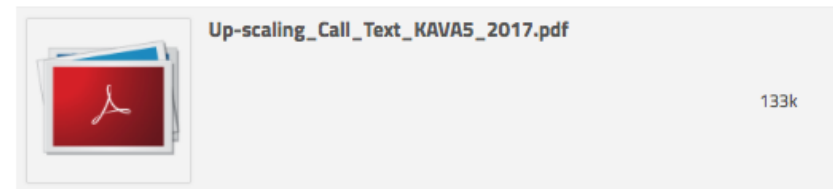# Up-Scaling Projects - General rules and guiding principles

☑ • **Emphasize technical feasibility and business potential in the proposal.**
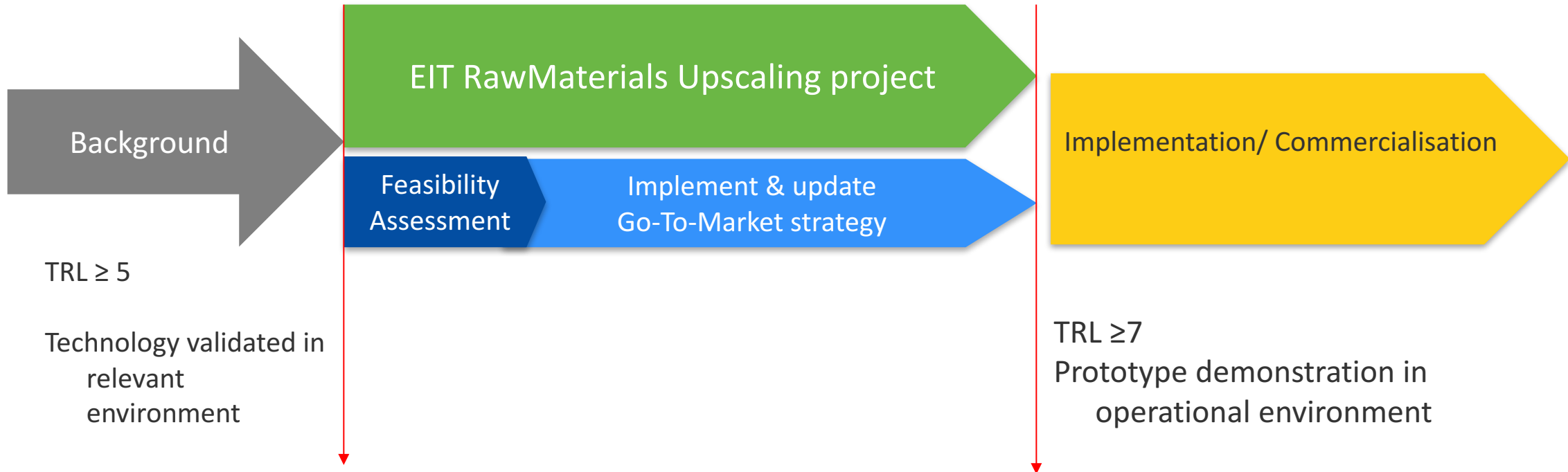
Feasibility and Go-to-market Strategy

Innovation projects need to be based on a solid *feasibility assessment,* covering important aspects, such as: external context (technical, regulatory, social, environmental, political, etc.), user needs and targeted applications, customer value proposition, target market(s) (size, structure, growth potential, segmentation, etc.), risk assessment, design or market studies, and intellectual property exploration. The ultimate goal is to put a new product, service or process to the market, possibly through an innovative application of existing technologies, methodologies, or business processes, state of the art and technology risk, competitors and competitive positioning, IP protection, business model and exploitation strategy, etc.

A preliminary go-to-market strategy is expected to be included in the proposal as *Work Package 0* (WP0). Relevant feasibility aspects identified in the proposal must be assessed in WP0. WP0 will be updated throughout the duration of the project and enable go/no-go decisions following annual reviews.

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What is an Up-Scaling Project?

Background

EIT RawMaterials Upscaling project

Feasibility Assessment

Implement & update Go-To-Market strategy

Implementation/ Commercialisation

TRL ≥ 5

Technology validated in relevant environment

TRL ≥7
Prototype demonstration in operational environment

Up-Scaling – consider also

- **Strategic Importance**
    - The **innovation aims at exploring new market opportunities**.
    - **Vision, mission and objectives** of project.
    - The proposal provides a **realistic description of the current stage** of development and **added value of its innovation**.
    - The expected **performances of the innovation are convincing** and have the potential to be relevant from a commercial point of view (**value for money; return of investment**).
    - The innovation/solution has a clear **European/global dimension** both with respect to commercialisation and with respect to competitor/competition evaluation.
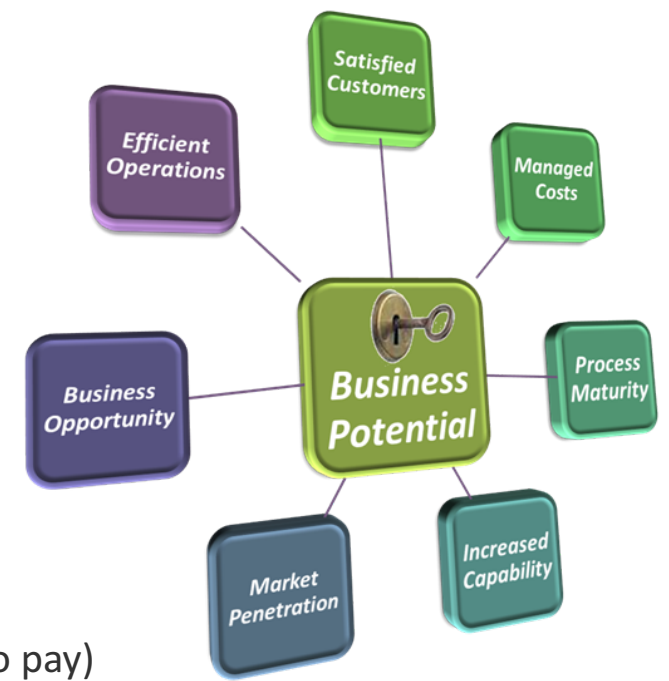
- **Financial viability**
    - The proposal demonstrates that the allocation of financial resources corresponds the project's ambition and the roles of the partners.
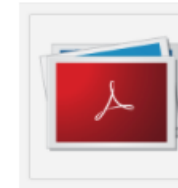   - **What will happen after end of project?**

FINANCIAL VIABILITY ASSESSMENTS

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Up-Scaling – consider also…

- **Business potential**
    - **Comparison** with state-of-the-art, known commercial solutions, including costs, environmental benefits, gender dimension, ease-of-use and other features, or includes plans for achieving this information.
    - The proposal reflects a very good understanding of **both risks and opportunities** related to a successful market introduction of the innovation, both from a technical, commercial point of view.
    - The proposal indicates in a convincing way that **there will be demand/market** (willing to pay) for the innovation when the product /solution is introduced into the market.
    - The **targeted users or user groups** of the final product/application, and their needs, are well described and the proposal provides a realistic description of why the identified groups will have an interest in using/buying the product/application, **compared to current solutions available**.
    - It is described in a realistic and relevant way how the innovation has the **potential to boost the growth of the applying partners.**
    - The proposal demonstrates **understanding of the financial and organisational requirements for commercial exploitation**. The initial commercialisation plan is outlined and explains how will be further developed (in-house development, licensing strategy, etc.)
    - The proposal includes a realistic and relevant description of status and strategy of knowledge protection, the need of **"freedom to operate analysis", and current IPR situation**, which could include a plan for achieving this information. If relevant, potential regulatory requirements are also addressed.

Evaluation criteria - UpScaling

#	Weight	Reference in Template	Description of Criteria
	Total: 7		**1. Strategic importance for the KIC**
1.1	2	Section 3.2	Strategic importance of the solution (product/service/process) and of the key outputs brought by the project: importance of the problem addressed for the RM sector, relevance of the solution to properly address the problem, contribution to the strategic objectives[2] of the KIC
1.2	3	Section 3.5	Benefits provided to the wider KIC community related to expected impact, as well as any other useful value for the KIC (e.g. contribution to education, support to other KAVA activites, to KIC customers or other stakeholders, in comparison to the size of the requested KAVA funding activities, to KIC customers or other stakeholders, in comparison to the size of the requested KAVA funding
1.3	2	Section 3.6	Contribution to KIC KPIs[3], KPIs are described in the Strategic Agenda 2016-22 of EIT RawMaterials document

Notes & recommendations:
- *Make a clear description of challenge – solution*
- *Related it to mission and strategic objectives of EIT RM*

- *Benefit to the wider EIT RM community/value for partners*
- *Point out relationships to other activities*

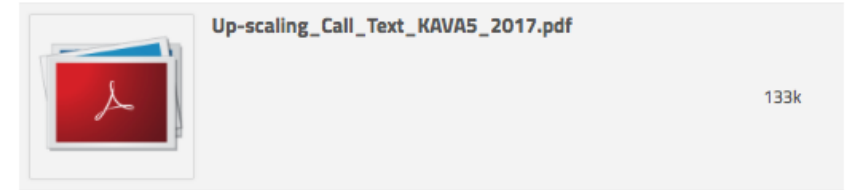- *Relation to KPI – estimate (optimistic but realistic)*

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Evaluation criteria - UpScaling
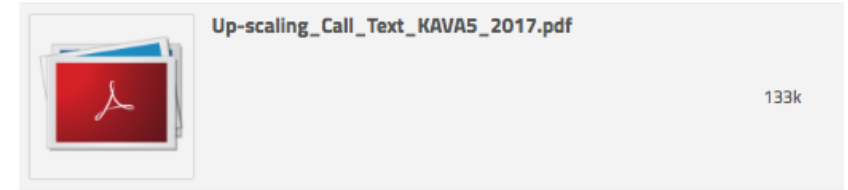
		Total: 6	2. Business potential
2.1	2	Section 3.3	Technical feasibility of the solution based on the technology(ies) currently available to consortium partners
2.2	2	Section 3.4	Innovativeness of the proposed solution, and expected competitive advantage vs. other solutions (already available in the market or in development)
2.3	1	Section 3.4	Business opportunity assessment (preliminary, to be confirmed/deepened at end of WP0): value proposition to target customers, market size and expected growth, ability to bring the solution to the target customers, etc.
2.4	1	Section 3.3	Clear description of the IP management: background IP, ability to generate new IP, ability to protect, and valorize IP among partners and eventually with KIC

Notes & recommendations:
- *Be honest… the evaluators are also experts.*
- *Justify the innovativeness – what kind of innovation; be honest.*
- *Why is this better than other solutions?*

- *Business potential – put a value on it, show that you have investigated the market, get market intelligence data, be "creative" in estimating the value, expected growth, etc.*

- *IP – justify and what new IP*

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Evaluation criteria - UpScaling

	Total: 5		3. Quality of the consortium
3.1	3	Section 5	Soundness of the consortium: Quality and relevance of the leading partner, presence of complementary partners covering the key elements of the value chain, diversity of countries and CLCs represented in the consortium, Involvement of relevant industrial partner(s), presence of one or several SME(s) as active Task partners
3.4	2	Section 5	Roles and governance: Clear definition of roles corresponding to the specific strengths of each partner, clear definition of project governance structure and of coordination mechanisms among partners

Notes & recommendations:
- *Justify relevance and commitment from all partners.*
- *Industrial partners*
- *Justify bringing in an external partner (lesser extend if it is SME / unique industry partner)*

- *Justify partner strengths*
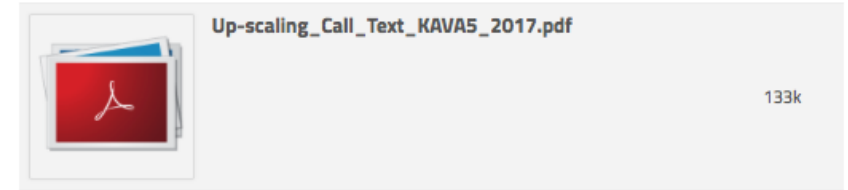- *Project structure*
- *Explain management setup of project*

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Evaluation criteria - UpScaling

#	Weight	Reference in Template	Description of Criteria
		Total: 7	**4. Quality of the project definition**
4.1	3	Section 2	Clear definition of project objective and overall identifiable output
4.2	2	Section 6.1	Clear definition of work packages (WP) with concrete objectives, tasks and measurable deliverables (including for non-technical aspects of the project, e.g. marketing, finance, IP, stakeholder management, regulatory, etc.)
4.3	1	Section 6.1	Clear project schedule, with well-defined milestones
4.4	1	Section 6.2	Risk management: Identification of key risks (with regards to technology, market, regulatory, financial, stakeholders, managerial etc.) and effective mitigation measures

Notes & recommendations:
- *[Grandma test]; popular description & semi-technical description*
- *What is the aim of the project – what will the project produce; should be understandable to all! [Grandma test]*
- *Clear output – bullet/clear statement - understandable to all!*
- *Justify all WPs; don't just copy/paste! No automatic repetition, are the WPs logical, any missing WPs (e.g. commercialization)*

- *Logical project schedule related to WPs – with milestones*

- *Risk – there are risks! There are mitigation! Be honest.*

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Evaluation criteria - UpScaling

|		Total: 5	5. Financial viability
5.1	3	Section 7	Quality of the project budget definition: clear explanation and justification of costs, proper balance of costs among partners in line with their assigned roles.
5.2	1	Section 7.1, 7.2	Clear description of financial[4] and non-financial backflows provided to the KIC: Relative KIC share in the economic value of the project, e.g., in the form of a share in: license fees, royalties, future cost savings, future revenues, equity, etc. Support to other KAVA activities (e.g., education, network of infrastructure, entrepreneurship support services), to KIC customers (e.g. students, SMEs) or other stakeholders (e.g. public authorities, NGOs, etc.).
5.3	1	Section 7.3	Eligible KCA and KAVA co-funding: relevance of the proposed KCA in support of the up-scaling project, and balance in the amount of financial resources (KCA and KAVA co-funding) brought by the different partners (in relevant proportion to the importance of their respective roles in the project).

Notes & recommendations:
- *Justify and explain costs*
- *Balance cost amongst partners – if a partner is getting a very low part of budget; why? Is the partner needed (is it a symbolic partner?)*
- *Show that you have considered the backflow; suggest 1-3 models for backflow*
- *Don't underestimate the power of non-financial backflow*
- *KAVA co-funding - it can actually be more than 15%; show the level of commitment, show belief in the product/business – if close to market; why then only 10%?*

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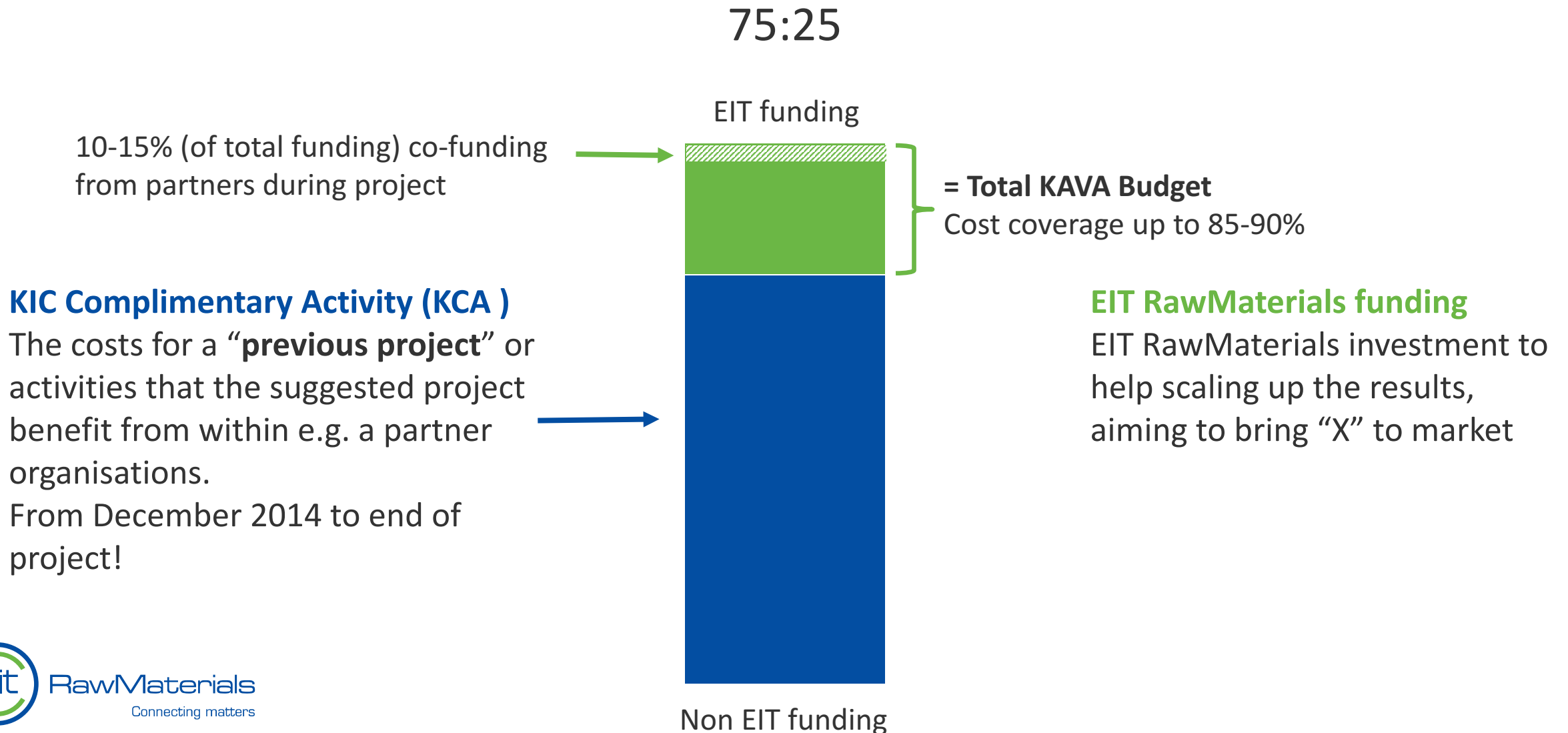
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Selection criteria - UpScaling

- Projects with higher ranking will be preferred for funding.

- Depending on received applications, it is expected that the following approximate allocations will be applied based on the primary Thematic Area of the proposal:

  - 30-50% on Exploration & Mining,

  - 30-50% on Recycling, Substitution & Circular Economy,

  - 10-30 % on Processing.
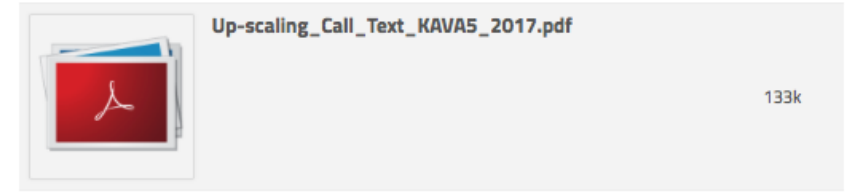
Notes & recommendations:
- *Be honest about the Thematic Areas; especially the primary one – and consider justify it.*

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Co-funding model of a KAVA Up-Scaling budget

75:25

EIT funding

10-15% (of total funding) co-funding from partners during project

= Total KAVA Budget
Cost coverage up to 85-90%

KIC Complimentary Activity (KCA)
The costs for a "**previous project**" or activities that the suggested project benefit from within e.g. a partner organisations.
From December 2014 to end of project!

EIT RawMaterials funding
EIT RawMaterials investment to help scaling up the results, aiming to bring "X" to market

Non EIT funding

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