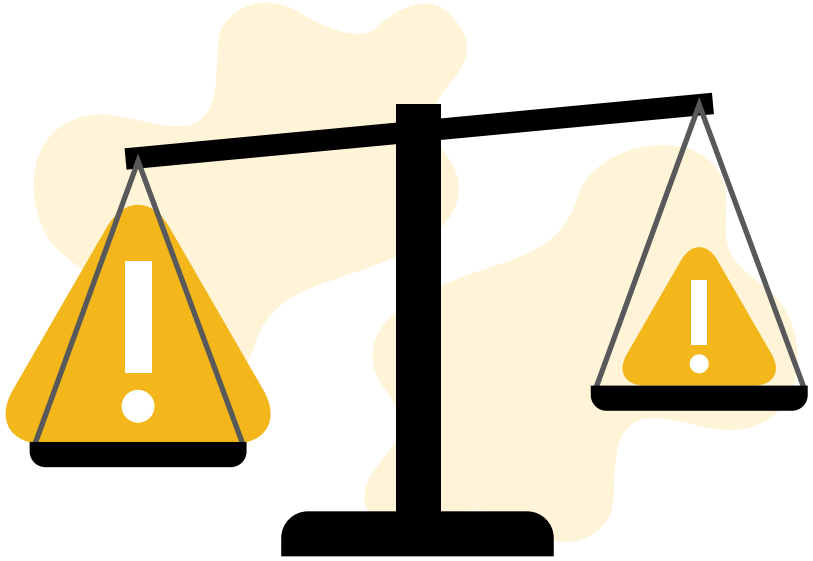
BM.17
Evaluate the risks



Requires dialogue

The aim of this activity is to capture the risks of implementing each of the business model concepts in a systematic manner and suggest how the risks could be managed.

INPUTS

- Complete business model concepts, from the activity *BM.4 Generate business model concepts at the big picture level*.
- Data from In-Depth Assessment, from the activity *BM.2 Gather additional data on the business model,* and *the activity: BM.3 Gather additional data on operational performance*.

OUTPUTS

- An assessment of the implementation risks of the business model concepts, used in the activity *BM.18 Integrate all the evaluations and make the final selection*.

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An important part of the role of the Service Provider is to provide the company with the motivation and confidence to make bold choices to make rapid progress towards a more sustainable future. However, this should not be based on uncalculated risks. Therefore, it is important to ensure that actions are being taken to identify and manage all possible risks. For this task, a Risk Register can be used to structure an exercise to become aware of all related risks and define potential corrective actions, where necessary. Risks can be identified through a combination of prior experience, the company's own scepticism, and by conducting a brainstorming session. Instructions on how to conduct this type of session are provided below.

In terms of mitigating risks, one of the activities you can do is to test out some of the assumptions that appear in the business model options. One of the most important building blocks to test is the Value Proposition block as if your target customer groups do not value your product or service the business model will fail. For example, if the Tasty Tuna Company wanted to test the assumption that fishermen would be willing to pay for a tuna processing and distribution service they could perform interviews with several of the fishermen that are currently their suppliers to discuss this idea. This activity would require some time and effort to implement, but it is far better to make this small investment at this stage, then commit to a whole scale change in business model only to find that your assumptions were incorrect.

HOW TO GO ABOUT IT

Preparation

1. Identify a group of insightful and experienced people from the company, who have prior experience of projects within the company, both from a technology and a commercial viewpoint.
2. Together with the group, gather a gross list of risks connected to the project upon which you are working. This list can be generated from a combination of sources, such as prior experience, own scepticism, or the result of a structured brainstorm.

Applying the Risk Register template

3. Take the *Risk Register template* and begin filling in the fields – one row per identified risk. An explanation of each field in the template is provided below and is accompanied by an example.
    - *Risk code:* This simply helps the project manager to keep track of each risk and creates a reference to check performance against.
    - *Risk name:* The risk is described in this field – only one risk per entry.
    - *Risk category:* A category list can be defined, so as to facilitate an easy organization of the risks for the company. The categories could relate to the product life cycle, company departments, or a complete other set of categories.
    - *Probability (1-3):* Enter a simple score, showing 1 for a low likelihood of the risk materializing into an actual problem, 3 for a high likelihood.

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- *Impact (1-3)*: Evaluate the potential negative impact on the project and/or company, from 1 to low negative impact to 3, for high negative impact.
- *Risk score:* Multiply the probability score with the impact score, to attain a risk score. This score should help the company to prioritize their efforts.
- *Mitigation:* Write here a consideration of how which measures could (and probably will) be taken to stop the risk from materializing.
- *Contingency:* Prepare for worst-case by preparing a contingency plan, in case the risk does manifest itself as an actual problem.
- *Action date:* Record when it is decided to take action
- *Action by:* Record who is responsible for mitigating each risk.

Template of Risk Register

Risk Register for _____

Risk code and name	Impact description	Probability (1-3)	Impact (1-3)	Risk score	Mitigation	Contingency	Action date	Action by

Risk register

Project _____ Date _____ Version _____

Risk code and name	Impact description	Probability (1-3)	Impact (1-3)	Risk score	Mitigation	Contingency	Action date	Action by

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LEARNING CASE STUDY OF RISK REGISTER

Risk Register for Tasty Tuna Company - Cooperative business model proposal								
Risk code and name	**Impact description**	**Probability (1-3)**	**Impact (1-3)**	**Risk score**	**Mitigation**	**Contingency**	**Action date**	**Action by**
Risk 01 *Tuna caught illegally*	• *Product removed from market.* • *Loss of reputation* • *Fine of imprisonment* • *Loss of key suppliers*	*3*	*3*	*9*	*Work with licensed fishing companies and ask to see evidence of quota compliance.*	*Work with a variety of fishing companies, at least for first 2 years*	*14/01/15*	*Mr. Tasty*
Risk 02 *Fisherman not willing to join cooperative*	• *Loss of revenue* • *Loss of key suppliers*	*1*	*3*	*3*	*Hold meeting with senior fishermen to explain risk of business as usual approach and benefits of cooperative model.*	*Continue to offer current transactional business model during transition period to maintain revenue if uptakes is slow.*	*22/02/15*	*Mrs. Tuna*

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Risk Register for Tasty Tuna Company - Cooperative business model proposal

Risk code and name	Impact description	Probability (1-3)	Impact (1-3)	Risk score	Mitigation	Contingency	Action date	Action by
Risk 03 *Customer rejects product*	• *Poor product sales*	*2*	*3*	*6*	*Carefully planned marketing campain*	*Prepare a list of FAQ's and answer all possible questions from customer's well in advance*	*23/06/15*	*Mr. Tasty*
Risk 04 *Customer misunderstands the project as green-washing*	• *Poor product sales* • *Loss of reputation*	*2*	*3*	*6*	*Consider creating a parallel brand for the product, so as not to confuse or endanger the existing brand.*	*Be prepared with detailed environmental product declarations beforehand*	*14/06/15*	*Mrs. Tuna*

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TIPS & TRICKS

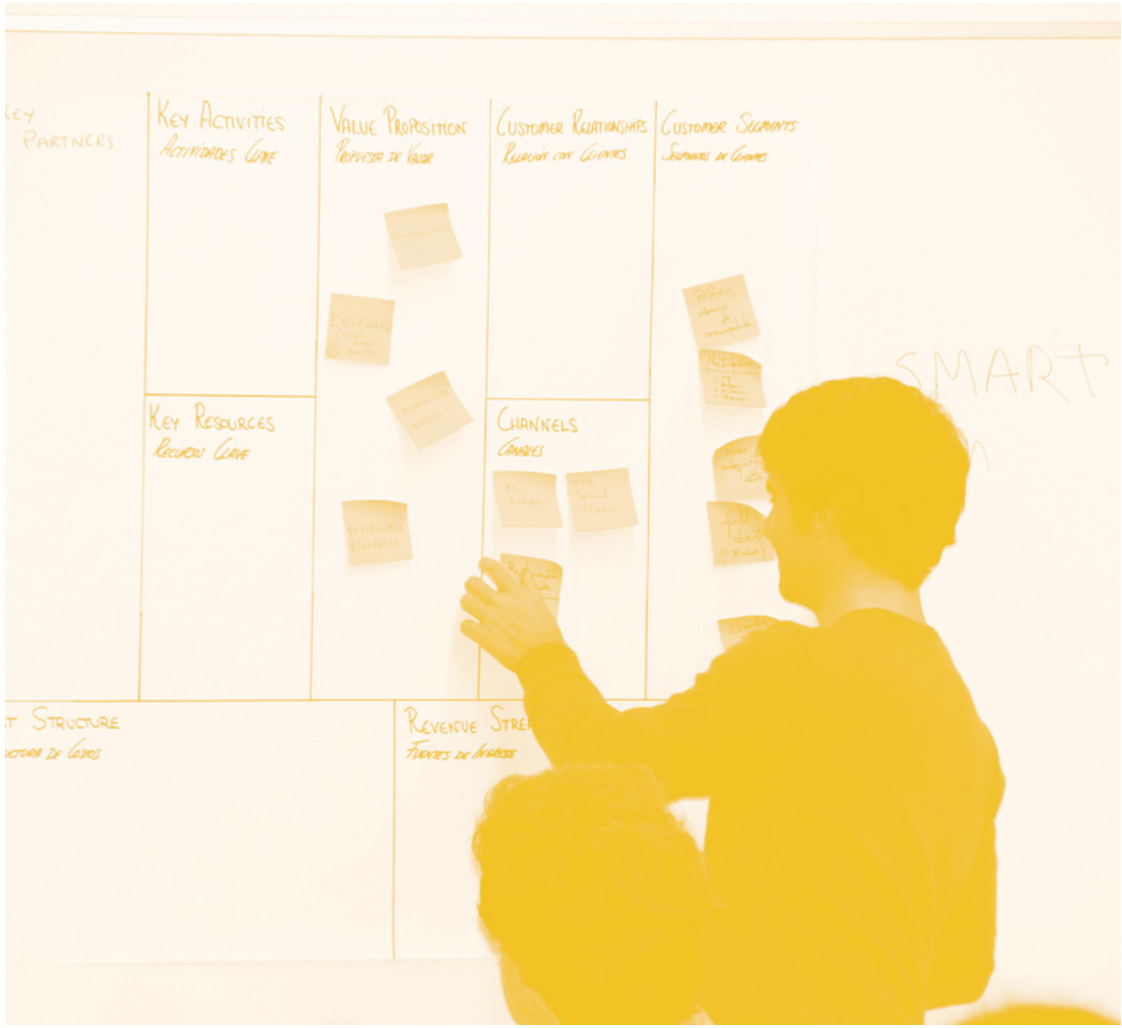
CONSIDER BUSINESS AS USUAL RISKS

A good starting point for such a brainstorming activity is to review the risks the company will face if it continues with the current business model. This can be a useful reminder for senior management of the drivers for change.

CONSIDER GENDER DISCRIMINATION RISKS

Failure to take action to improve gender equality and eliminate gender discrimination is a business risk that is often overlooked but can have important consequences including a disenfranchised workforce and even legal action against the company in some cases.

→ Further information in the Agri-food, Chemicals and Metals Supplements



BM.17 Evaluate the risks

Eco—i Agri-foods

TIPS & TRICKS

EVALUATE FOOD SAFETY RISKS

In the food and drink processing industry, product safety is a key risk specifically associated with food manufacturing. The manufacturing process has to guarantee that the product is safe for human consumption along the distribution chain. Any changes in the operations of a company might affect the food safety. Food safety should therefore be continuously re-evaluated during eco-innovation activities affecting the manufacturing process.

BM.17 Evaluate the risks

Eco—i Agri-foods

LEARNING CASE STUDY OF RISK REGISTER

Risk Register for Mango Pulp Company								
Risk code and name	**Impact description**	**Proba-bility (1-3)**	**Impact (1-3)**	**Risk score**	**Mitigation**	**Contingency**	**Action date**	**Action by**
Risk 01 *Farmers not complying with new farming methods*	• *Loss of reputation and trust amongst consumers* • *Loss of supply and revenue*	*2*	*3*	*6*	*On site visits and training for farmers*	*Work with many farmers in order to secure a supply of fruits and vegetables*	*17/11/14*	*Operations manager*
Risk 02 *Inability to obtain desired certification within 4-5 years*	• *Harder to penetrate the international market and gain competitive advantage over cheaper products*	*2*	*3*	*6*	*Carefully planned certification process with dedicated resources*	*Continue selling the products without the certification until requirements are met*	*14/01/15*	*CEO*
Risk 03 *Attract educated workforce*	• *New business model is dependent on R&D which requires educated workforce. Diversification and waste value addition is not possible without it*	*1*	*3*	*3*	*Offering fair payment and benefits and a good career opportunity*	*Current employees are experienced and could be further educated with the help of external partners to take on the R&D activities*	*26/03/15*	*Technology manager*
Risk 04 *Lack of financial resources*	• *Farmers will not be able to switch to sustainable agriculture without access to finance and the company will be able to invest in new technology and R&*	*3*	*3*	*9*	*Creating a strong pitch dedicating time for negotiations with financial institution in order to score the best deal*	*Be prepared with detailed economic documentation beforehand* *Contact government to see if they can help*	*01/04/15*	*Marketing manager & accounant*

BM.17 Evaluate the risks

Eco—i Chemicals

BACKGROUND INFORMATION

The following figure can be used as a benchmark to help you evaluate the business case for eco-innovation by providing success rates, time to commercialisation, relative increase in profit margin, and internal rate of return. This information can be incorporated into the *Risk Register* template already provided in the Eco-innovation Manual.

Low ← **Degree of market familiarity** → High

Market development: Product / service extensions into new markets		**Differentiation:** New product/service launches in new markets	
Success rate[1]: 30-40%	On-top margin[3]: 0-10%	Success rate: 15-20%	On-top margin: 0-60%
Time to commercialisation[2]: 2-7 years (average 5)	Average IRR[4]: 20-25%	Time to commercialisation: 8-19 years (average 14)	Average IRR: 8-12%
Market penetration: Product /service extensions into existing markets		**Product development:** New product/ service launches in existing markets	
Success rate: 40-50%	Success rate: 40-50%		
Time to commercialisation: 2-5 years (average 4)	Average IRR: 18-23%	Success rate: 30-40%	On-top margin: 0-10%
		Time to commercialisation: 6-15 years (average 11)	Average IRR: 13-18%

High ← **Degree of technology familiarity** → Low

Figure 4. Matrix providing success rates, time to commercialisation, relative increase in profit margin, and internal rate of return for different categories of product innovations (based on Miremadi et al, 2013).

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Eco—i Chemicals

[1]Success rate presents the portion of projects in a given quadrant that created a positive return on a net present value (NPV) basis, using the innovator's cost of capital (with no risk adjustment).

[2]Time to commercialisation is defined as the elapsed time between formal project initiation and the point at which the project's annual sales equal the total R&D investment in it.

[3]On-top margin is defined as the differential between the internal rate of return (IRR) of a new product based on innovation and the IRR of an incumbent product in the market that it replaces, net of cannibalisation.

[4]IRR: The internal rate of return is the cost of capital at which the net present value equals 0 percent.

References

Miremadi, M., Musso, C., Oxgaard, J. (2013). Chemical innovation: An investment for the ages. McKinsey & Company

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Eco—i Metals

LEARNING CASE STUDY OF RISK REGISTER

Risk Register for for BikeBizz Co. Sustainable "Return&Reuse" business model								
Risk code and name	**Impact description**	**Probability (1-3)**	**Impact (1-3)**	**Risk**	**Mitigation**	**Contingency**	**Action date**	**Action by**
Risk01 *Not enough interest in sustainably produced bicycles*	• *Poor product sales* • *Loss of customers*	*2*	*2*	*4*	• *Develop and invest in appropriate marketing and awareness raising campaign*	• *Work with large companies and public sector stakeholders to try to interest them in buying your products*	*2 months before scheduled date for bringing product to the market*	*BikeBizz CEO and BikeBizz sales and customers manager*
Risk02 *Using secondary raw materials and reused parts results in lower quality of products*	• *Loss of reputation* • *Loss of key suppliers* • *Increase of final product prices* • *Poor product sales*	*1*	*3*	*3*	• *Check material carefully before deciding to reuse it* • *Ensure technical staff has sufficient level of skills and experiences to overcome challenges involved* • *Provide necessary equipment*	• *Just use secondary material of high quality, accepting the resulting higher use of primary material* • *Recruit a specialist* • *Invest in additional equipment*	*2nd month of the BM*	*BikeBizz CEO*

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Eco—i Metals

Risk Register for for BikeBizz Co. Sustainable "Return&Reuse" business model

Risk code and name	Impact description	Probability (1-3)	Impact (1-3)	Risk	Mitigation	Contingency	Action date	Action by
Risk03 *Customers are not interested to join in the return & reuse scheme*	• *Loss of revenue.* • *Loss of key suppliers of secondary raw materials* • *Lack of material for production* • *Loss of investment money*	*2*	*3*	*6*	• *Develop and undertake awareness raising campaign* • *Intensively engage in promotion activities (e.g. through media, specialised events)*	• *Continue to offer current business model during transition period to maintain revenue if uptake is slow* • *Supply secondary raw materials through alternative source, e.g. other companies involved in recycling*	*After 6th month of the BM*	*BikeBizz CEO Sales and customers*
Risk04 *Difficulties to find suppliers of non-hazardous chemicals (e.g. solvent free paint)*	• *Inability to reduce VOC emissions* • *Health issues for workers* • *Problems with compliance*	*1*	*2*	*2*	• *Contact consultancies, universities or research institutes for advice how to find suppliers*	• *Employ a technical manager who will be responsible to ensure this is realised.* • *Continue fabrication with hazardous chemicals*	*1st month of the BM*	*BikeBizz CEO*
Risk05 *Recovered parts from returned bicycles do not always fulfil the requirements for the new bicycles requested*	• *Lack of material for production*	*2*	*2*	*4*	• *Employ skilled technicians and designers who are able to find solutions to adapt the parts or the bicycle configuration so that the recovered parts can still be used*	• *Use more parts produced specifically and just those recycled parts which fit (maybe the others can be stored and used later on)*	*After 6th month of the BM*	*BikeBizz CEO Leader of the technical team*