GPA GLOBAL PLATFORM FOR ACTION

EDM ENERGY DELIVERY MODELS

7 AFFORDABLE AND CLEAN ENERGY

ENERGY DELIVERY MODELS (EDM) TRAINING

Guidance on How to Take the Training

EDM Project Managers:

- *Aimee Jenks (aimee.jenks@unitar.org)*
- *Elif Gül Demir (elif.demir@unitar.org)*

Training delivered by:

unitar United Nations Institute for Training and Research

With support from:

MECS Modern Energy Cooking Services

UKaid from the British people

iied

NORCAP NORWEGIAN CAPACITY OPERATED BY NRC

SELCO FOUNDATION

About the EDM Training

While access to energy is crucial for cooking, lighting, heating, clean water, and most income-earning activities, energy for many displaced people, including in refugee camps, is either non-existent or severely lacking in terms of availability, accessibility, and quality. This means that they often rely on solid fuels like firewood to cook, negatively impacting their health from the smoke, and the environment through the effects of deforestation. Lack of access to electricity means they resort to candles, kerosene lanterns or torches for lighting. To date, humanitarian programs have often focused on distributing firewood and solar lanterns that only meet basic energy needs. Addressing energy access sustainably and for the long term has been a considerable challenge. Local markets and energy enterprises can be used to deliver cleaner energy options, but there are barriers such as low affordability among the displaced or humanitarian, development and private sector actors' lack of awareness of displaced communities energy needs.

Shift from short term '**procure and provide'** mindset of humanitarian sector, to longer-term approaches that **develop local skills and market systems**

The Creation of the EDM Training

To fill the capacity gap in the humanitarian sector, The United Nations Institute for Training and Research (UNITAR) is offering the Energy Delivery Models (EDM) training programme to support the integration of energy access and sustainable delivery models of modern energy services into humanitarian and development programming. The EDM Training is based on the Energy Delivery Models Toolkit developed by IIED and CAFOD, a standard process for inclusive planning of energy planning for energy poor communities. Through the EDM Training, participants develop the capacities to design people-centred, sustainable energy access programmes that contribute to local energy market development.

The EDM Training is a contribution to the Global Platform for Action (GPA) on Sustainable Energy in Displacement Settings, the global initiative to promote actions that enable sustainable energy access in displacement settings, as laid out in the Global Plan of Action Framework Document, thereby ensuring Sustainable Development Goal (SDG) 7 is inclusive of displacement situations. The EDM Training is delivered with financial aid and in kind support from MECS, NORCAP, SELCO Foundation, and IIED.

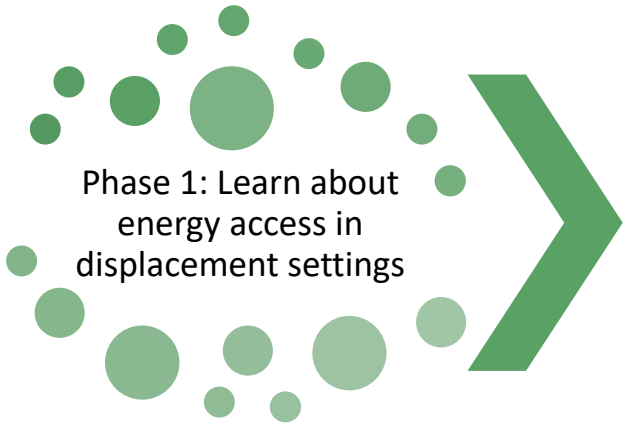
EDM Partners and Mentors

unitar United Nations Institute for Training and Research · WFP World Food Programme · MECS Modern Energy Cooking Services · UKaid from the British people · iied · NORCAP Norwegian Capacity · SELCO Foundation

Participant Organisations

WFP World Food Programme · UNHCR The UN Refugee Agency · NRC Norwegian Refugee Council · IOM • OIM · SNV · Dorcas for those in need · giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

EDM Training Journey



Phase 1: Learn about energy access in displacement settings

Module 1: Introduction to Energy Access in Displacement Settings

Phase 2: Identify energy needs and demands & Conduct energy value chain analysis

- Module 2: Hands-on Design of Energy Delivery Models
- Workbook for Module 2 (slides 6-48)

Phase 3: Conduct pre-feasibility assessment and collect baseline data

Using your EDM Canvas, it is suggested to get basic baseline data to justify your project proposal idea and inform the project approach and activities

Phase 4: Design project pilot using sustainable delivery models

- Workbook for Module 3 (slides 50-83)
- Mountain of Tomorrow (slides 84-95)
- Project Pitch Template (slides 96-104)

How to Use This Guide?

STEP	ONLINE LEARNING	SLIDES
Step 1. Identifying energy needs and solutions Step 2. Creating a connection circle	Module 2, Lessons 1-2: Energy Solutions and Gaps	12-19
Step 3. Analysing the local energy value chain through the EDM canvas	Module 2, Lesson 3: End Users, Value Proposition, Accounting, and Delivery Structure Module 2, Lesson 4-6: Enabling Environment, Supporting Services, Conclusion	20-50
Step 1. Describing the background and rationale for your energy project	Module 3, Lesson 3: Project Background, Goal, Objectives, Outcomes, Activities (Key Proposal Components)	56-59
Step 2. Identifying project goal, objectives, outcomes, and activities	Module 3, Lesson 3: Project Background, Goal, Objectives, Outcomes, Activities (Key Proposal Components)	60-62
Step 3. Creating Theory of Change, IF/THEN statements	Module 3, Lesson 3: Project Background, Goal, Objectives, Outcomes, Activities (Key Proposal Components)	63-65
Step 4. Developing project organizational chart	Module 3, Lesson 4: Project Partnerships, Stakeholder Involvement and Delivery Timeline	66-68
Step 5. Filling in project delivery timeline	Module 3, Lesson 4: Project Partnerships, Stakeholder Involvement and Delivery Timeline	69-71
Step 6. Producing Key Performance Indicators (KPIs)	Module 3, Lesson 5: Project Monitoring and Evaluation and Learning	72-75
Step 7. Creating a learning plan	Module 3, Lesson 5: Project Monitoring and Evaluation and Learning	76-78
Step 8. Pinning down risks and designing a mitigation plan	Module 3, Lesson 6: Sustainability & Risk	79-84

THANK YOU FOR YOUR INTEREST IN THE EDM TRAINING!

Please contact Aimee Jenks (aimee.jenks@unitar.org) and Elif Gül Demir (elif.demir@unitar.org) if you have any questions.

GPA GLOBAL PLATFORM FOR ACTION

EDM ENERGY DELIVERY MODELS

7 AFFORDABLE AND CLEAN ENERGY

HANDS-ON DESIGN OF ENERGY DELIVERY MODELS

Workbook for EDM Module 2

Training delivered by:

unitar United Nations Institute for Training and Research

With support from:

MECS Modern Energy Cooking Services

UKaid from the British people

iied

NORCAP NORWEGIAN CAPACITY OPERATED BY NRC

SELCO FOUNDATION

Hands-on Design of Energy Delivery Models

- In EDM **Introduction to Energy Access in Displacement Settings** module, you learned about energy and its relevance in humanitarian contexts, how humanitarian agencies and organisations work with access to energy, and ways to engage with energy in displacement contexts.
- EDM **Hands-on Design of Energy Delivery Models** module provides a framework to identify energy needs and what energy solutions may be suited to address them, understand energy value chains in the local contexts and identify energy solutions that are sustainable in the medium to longer term, identify barriers that prevent the local energy value chain from functioning properly, and design a set of strategies and solutions aimed at addressing those barriers.
- After identifying the energy needs & solutions and understanding key elements in the system, you will analyse the energy value chain through a tool called EDM Canvas. The EDM Canvas was developed by IIED and CAFOD, and is accompanied by the EDM Toolkit, a methodology for planning pro-poor energy services. This course is based on the EDM methodology. You will develop your canvas step by step by answering the questions provided in the workbook.

How to Use This Workbook?

This workbook accompanies **Developing Your Energy Delivery Model Project** module of the EDM training and contains several tools and templates to be completed by the participant.

If you are taking the facilitated version of the training, each project team has their own workbook stored in **an online shared folder**. Training facilitators and mentors will be tracking your progress through your workbooks, **so please make sure that your workbook in the shared folder is up to date**.

Guidance slides

GUIDANCE

- These slides are designed to complement online learning material and help your thinking process.
- For each step of this training workbook, an example has been included for a fictional energy project.
- Elisabeth is a fictional humanitarian agency field staff based in Mauritania that is taking this training.
- To illustrate the level of detail and an approach to the section, Elisabeth's energy project serves as an example.

Exercise slides

EXERCISE

- These slides contain the main tools used during the project development process and they are to be filled before the workshops.

Table of Contents

STEP	ONLINE LEARNING	SLIDES
Step 1. Identifying energy needs and solutions **Step 2. Creating a connection circle**	Lessons 1-2: Energy Solutions and Gaps	12-19
Step 3. Analysing the local energy value chain through the EDM canvas	Lesson 3: End Users, Value Proposition, Accounting, and Delivery Structure Lesson 4-6: Enabling Environment, Supporting Services, Conclusion	20-50

Training Schedule for the Facilitated Version

EDM TRAINING JOURNEY

	YOU ARE HERE		
ONLINE LEARNING	**Module 1:** Introduction to Energy Access in Displacement	**Module 2:** Hands on Design of Energy Delivery Models (EDMs)	**Module 3:** Sustainable Energy Delivery Model Project Development
INTERACTIVE WORKSHOPS	- Kickoff Workshop - Problem Framing Workshop	- Guidance on pre-feasibility studies - Concrete project examples of Modern Energy Cooking Services	- Sharing Value Chain analysis - Guidance on project development - Innovative financing models	- Tips on developing a project pitch - "Donor Dialogue" session with energy donors and financers
ONE-ON-ONE MENTORING	Bi-weekly one-on-one guidance sessions with energy			

STEP 1. IDENTIFYING ENERGY NEEDS AND SOLUTIONS

GUIDANCE

Energy Needs and Solutions

Energy need: What are the most important energy needs in your country, and which one would you like to prioritize?

To address the nutrition gap in the country, WFP provides cash-based transfers to the poorest households. The most recent Vulnerability Analysis showed that a good part of this transfer goes to buying fuelwood. In addition, a study by a partner agency, has highlighted that people limit their purchase of nutritious foods to compensate for the cost of fuel. This problem is particularly severe for refugees.

Another priority that has emerged from the School Feeding annual report is that schools sometimes cannot cook meals because they don't have enough fuel.

Households are probably the highest priority at this moment since the issue of lack of fuelwood is threatening to nullify efforts being made in tackling nutrition on a larger scale.

Energy solutions: What solutions may address the energy need identified?

Energy efficient cookstoves would reduce the amount of fuel required to cook.

EXERCISE

Energy Needs and Solutions

Energy need: What are the most important energy needs in your country, and which one would you like to prioritize?

[Your answer here]

Energy solutions: What solutions may address the energy need identified?

[Your answer here]

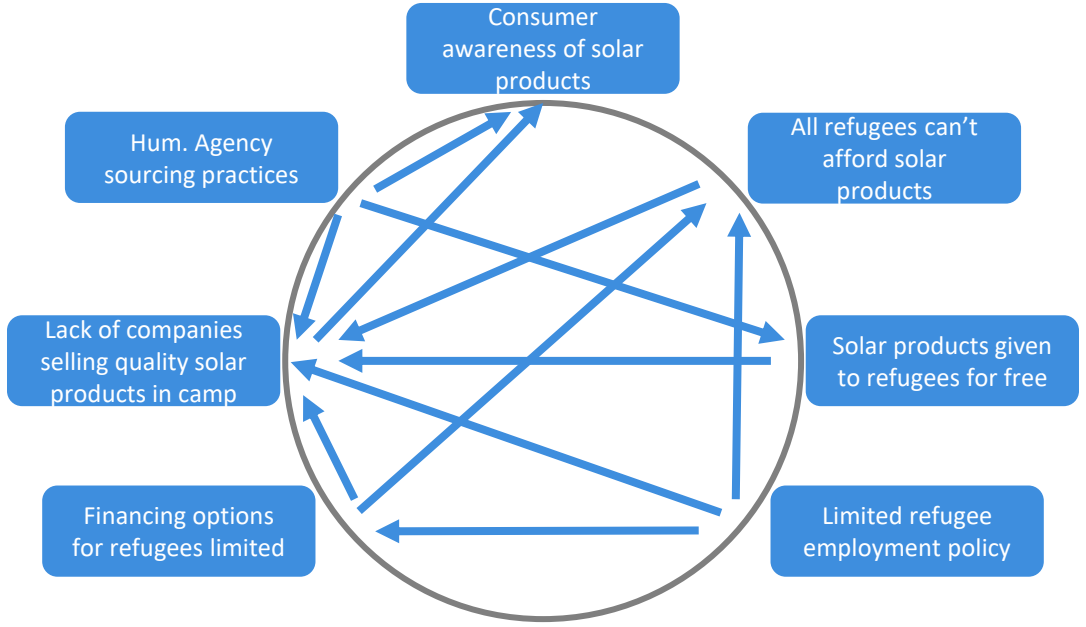
STEP 2. CREATING A CONNECTION CIRCLE

Connection Circle

Connection circle is a tool for visualising relationships in a system to understand complexity by seeing causes and effects in the system [1]. This video introduces systems thinking and the Connection Circle.

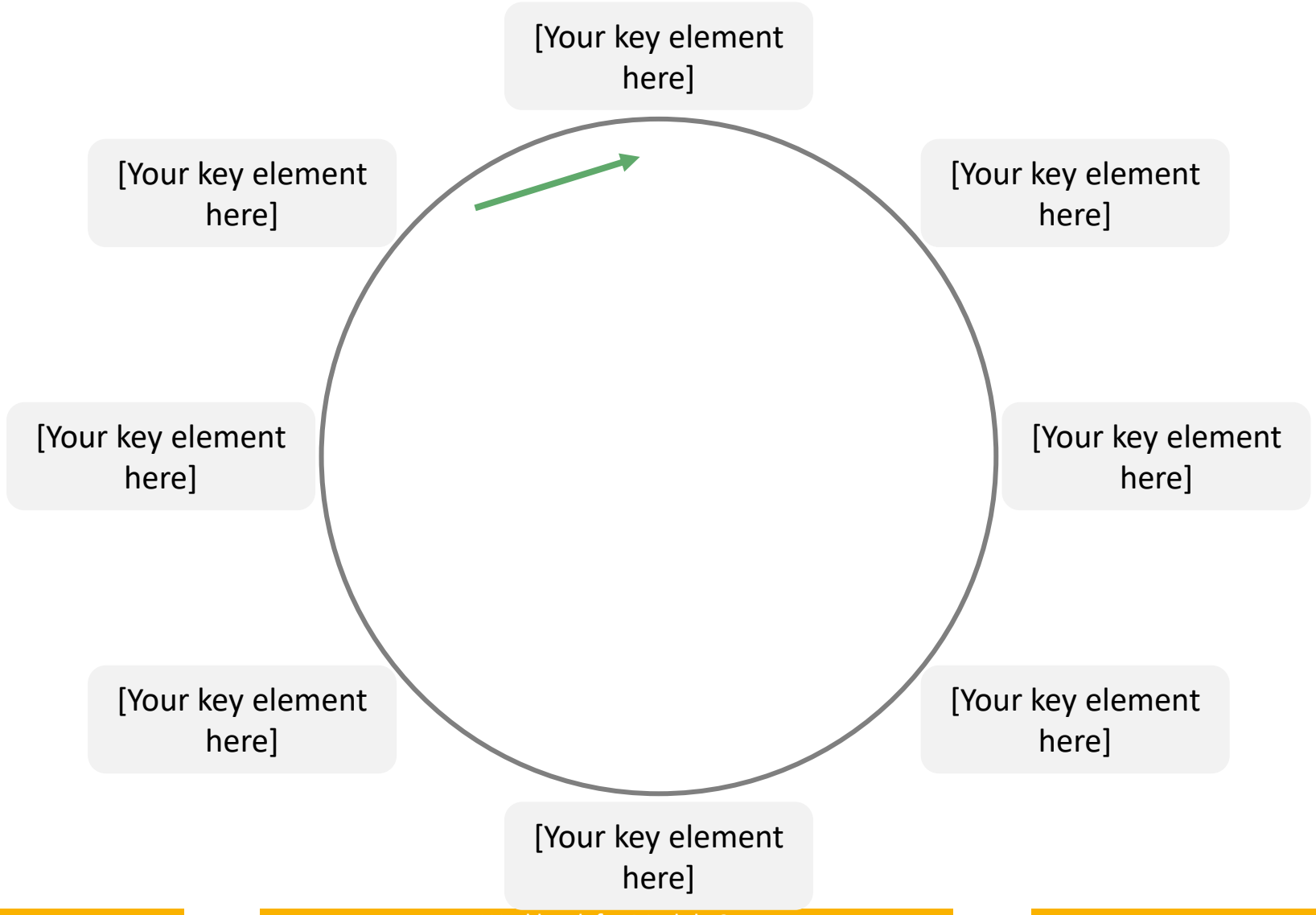
How to create a connection circle?

1. Identify the key elements of the system. Key elements are:
    - Important to changes in the system
    - Increases or decreases in the system
2. Write the elements around the circle (no more than 10).
3. Look for cause and effect:
    - Which elements are directly causing other elements to increase or decrease?
    - Draw an arrow between these elements.
4. Find all of the cause-and-effect relationships.
5. Look for elements whose relationships form closed loops. These are feedback loops.



EXERCISE

Connection Circle



GUIDANCE

Connection Circle Analysis

- Which elements have the most or least arrows to and from them? What does this tell you about the most important influences on the system?
- What 'feedback loops' can be seen (where arrows can be traced in a chain connecting several elements but ending back on the first)?
- Are some elements in more than one feedback loop? What does this tell you and how will it affect your approach to understanding or solving an issue?
- What elements in the system need to change to bring about the desired change?
- How can your proposed energy project help solve this social problem and what are the feedback loops key to making change? Note these as they may impact your project proposal, providing new approaches and partnerships.

- The most arrows are going toward 'lack of companies selling quality solar products in camp' and the most arrows are going away from 'limited refugee employment policy' and 'humanitarian agency sourcing practices.' These observations tell me that they are the most important elements to focus on to impact the social problem I identified. They need to change to bring about the outcome at a systems level.
- There are no feedback loops, which tells me that the system relationships are complicated and perhaps broken. This tells me I will need to look for creative approaches to influence these elements and develop new partnerships.
- My proposed energy project can help solve this social problem by encouraging companies to sell quality solar products in camp, which can generate commission jobs that do not violate the restrictive refugee employment policies.
- To address humanitarian agency sourcing practices, I can meet with my humanitarian agency colleagues to tell them about my project and see if we can partner. I can also share the learnings from my project with them to influence their sourcing practices.

Connection Circle Analysis

GUIDANCE

- Which elements have the most or least arrows to and from them? What does this tell you about the most important influences on the system?
- What ‘feedback loops’ can be seen (where arrows can be traced in a chain connecting several elements but ending back on the first)?
- Are some elements in more than one feedback loop? What does this tell you and how will it affect your approach to understanding or solving an issue?
- What elements in the system need to change to bring about the desired change?
- How can your proposed energy project help solve this social problem and what are the feedback loops key to making change? Note these as they may impact your project proposal, providing new approaches and partnerships.

[Your answer here]

STEP 3. ANALYSING THE LOCAL ENERGY VALUE CHAIN THROUGH THE EDM CANVAS

Please complete this exercise before the workshop.

EDM Canvas

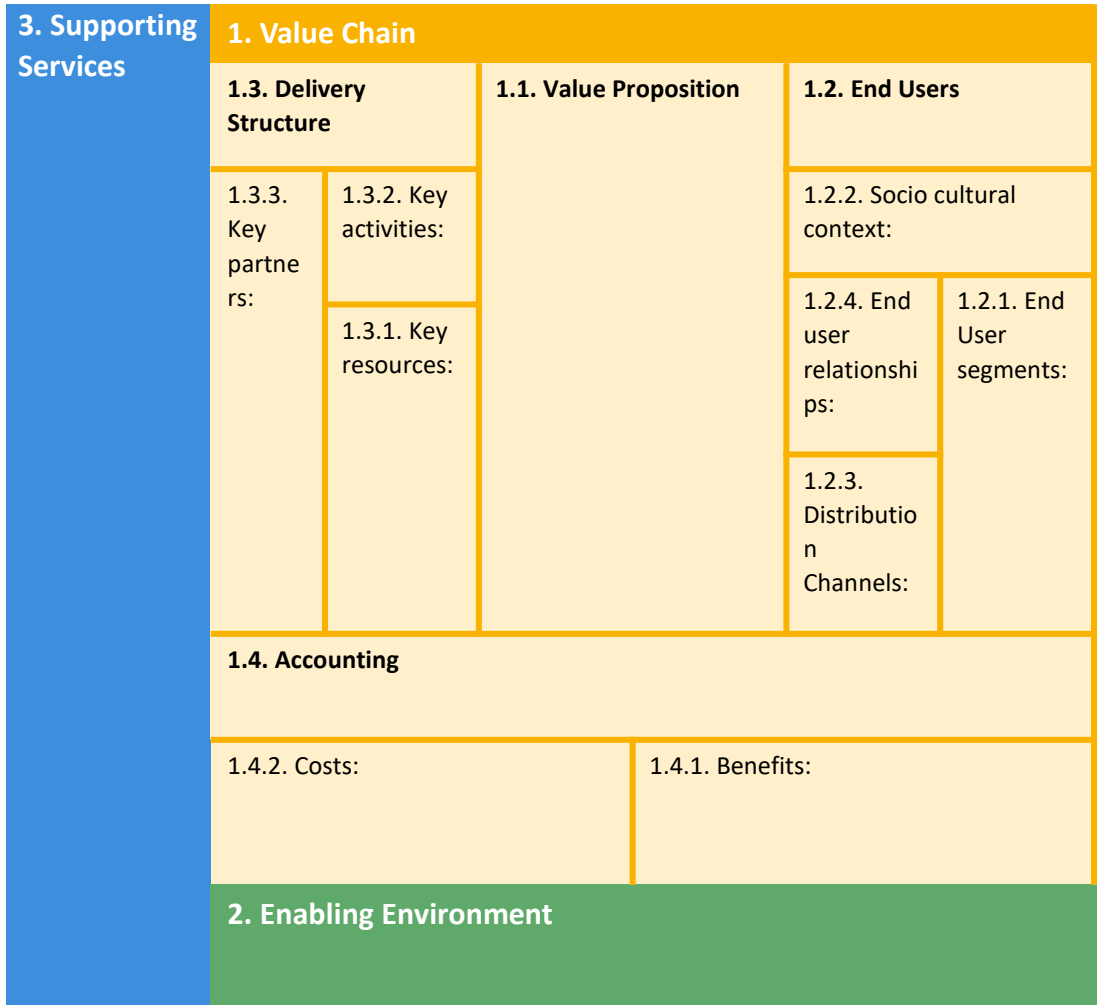
GUIDANCE

The questions in the next slides aim to help your thinking process. **You may not have the answers to all of them** so just try to fill in as much as you can and note down information gaps.

The energy delivery model (EDM) refers to the core set of activities and resources needed to deliver an energy service to targeted end users. The EDM Canvas, shown on the right, is a useful tool to understand all aspects of energy value chains. The EDM Canvas is made of three main sections:

- **Value chain:** core of the delivery model describing full range of activities required to deliver energy services
- **Enabling environment:** the formal policies and legal frameworks and existing political and legal infrastructure that support the delivery of energy services
    - land rights, regulations, subsidies, availability of credit, incentives such as feed-in tariffs
- **Supporting services:** any additional support needed to address weaknesses or gaps in the enabling environment
    - start-up grants, micro-finance, training, awareness raising)

In the next slides, you will find guiding questions and example answers for each part of the EDM Canvas. You will then analyse your own value chain, write down your answers to the questions, and create a canvas in the end.



GUIDANCE

1. Value Chain → 1.1. Value Proposition

- Is your solution a product or a service?
- What is attractive about it?
- Is it new? Unique?
- How is it better than other existing solutions?
- What value are we adding to the end user's life?
- What problem are we helping the end user to solve?
- What needs of the end user are we helping to meet?
- What collection of products and services are we using to add value or solve a problem or satisfy the end-user's needs?
- What are the social and/or environmental problems we are solving? Are we creating any risks?
- How is the wider community beyond the specific end users going to benefit?

You can also use the following template to describe your value proposition: **By doing *** activities with *** people/organisations, we will deliver *** impacts and/or meet *** needs and/or solve *** problems.**

The solution could be a range of cookstoves (at different prices to cover all possible customers) that the end users would have access to purchase. The cookstove models should have much higher fuel savings, so families would use less firewood to cook - meaning they spend less on fuel, can save time, have health benefits (because there is less smoke from cooking). The more expensive models will also have an attractive, modern look which would be appealing to the end users. Some models will also have the possibility to charge lights as well as mobile phones.

1. Value Chain → 1.1. Value Proposition

EXERCISE

- Is your solution a product or a service?
- What is attractive about it?
- Is it new? Unique?
- How is it better than other existing solutions?
- What value are we adding to the end user's life?
- What problem are we helping the end user to solve?
- What needs of the end user are we helping to meet?
- What collection of products and services are we using to add value or solve a problem or satisfy the end-user's needs?
- What are the social and/or environmental problems we are solving? Are we creating any risks?
- How is the wider community beyond the specific end users going to benefit?

You can also use the following template to describe your value proposition: **By doing *** activities with *** people/organisations, we will deliver *** impacts and/or meet *** needs and/or solve *** problems.**

By doing *** activities with *** people/organisations, we will deliver *** impacts and/or meet *** needs and/or solve *** problems.

[Your answer here]

GUIDANCE

1. Value Chain → 1.2. End Users → 1.2.1. End User Segments 1

Who are the end-users?

- Households, specific groups of people (youth, women)
- Institutions (schools)
- Businesses (farmers)
- Displaced people (in camps, urban environments)
- Existing users of diesel-powered productive activities

Describe

- Environment and experiences
- Geographic context (e.g., rural, urban, refugee camps)
- Demographic (age, profession, gender, ethnicity, nationality, education level, family size, familiarity with technologies such as mobile banking, skills, capacity and awareness of energy services options)
- Psychographic (season of life, interests, motivations, how energy needs are currently met, risk inclination - early adopter, trendsetter, traditionalist)
- Segment's dimension

Households in refugee settings.

Geographic context: marginal area, availability of fuelwood is scarce. Comes from the surrounding environment and people have to walk far to collect wood. Forest can't sustain energy needs of the displaced population over time.

Demographic: The refugees are composed of wide range of age groups and mostly drawn from within the country with minority groups from neighbouring Mali and Western Sahara. The average family size is 8 but there may be groups from 6 to 25 preparing meals and eating together.

Psychographic: The population seems quite attached to their traditional ways of life with a strong patriarchal structure. Cooking is done on open fires using firewood or animal dung

Segment: The camps host 60,000 refugees, surrounded by a population of 40,000, given that access to energy is a challenge for everyone, 100k could be the market size of the segment

1. Value Chain → 1.2. End Users → 1.2.1. End User Segments 1

EXERCISE

Who are the end-users?

- Households, specific groups of people (youth, women)
- Institutions (schools)
- Businesses (farmers)
- Displaced people (in camps, urban environments)
- Existing users of diesel-powered productive activities

Describe

- Environment and experiences
- Geographic context (e.g., rural, urban, refugee camps)
- Demographic (age, profession, gender, ethnicity, nationality, education level, family size, familiarity with technologies such as mobile banking, skills, capacity and awareness of energy services options)
- Psychographic (season of life, interests, motivations, how energy needs are currently met, risk inclination - early adopter, trendsetter, traditionalist)
- Segment's dimension

[Your answer here]

GUIDANCE

1. Value Chain → 1.2. End Users → 1.2.1. End User Segments 2

Describe and visualise types of users

- Figure out what tasks your customers are trying to accomplish (functional and emotional jobs) and write down each one
- Pinpoint the needs/problems that customers have in performing those tasks, including the challenges and risks they face
- Pinpoint the wants/aspirations that the customers have
- Rank the tasks, needs and wants in order of relevance and severity for the customer. Note that no product or service will be able to meet all the needs and wants in a customer's profile

Tasks: Women prepare meals for their families. This entails collecting/purchasing fuel, preparing and tending the fire, supervising the cooking process, cleaning pots and utensils after having meals.

Needs/problems: High cost of fuel, long time spent during the meal preparing process, risks of exposure to violence in case of fuel collection, stigma on charcoal stains on clothes and person.

Gains/advantages: Faster cooking, reducing the amount of fuel needed, less soot emissions.

EXERCISE

1. Value Chain → 1.2. End Users → 1.2.1. End User Segments 2

Describe and visualise types of users

- Figure out what tasks your customers are trying to accomplish (functional and emotional jobs) and write down each one
- Pinpoint the needs/problems that customers have in performing those tasks, including the challenges and risks they face
- Pinpoint the wants/aspirations that the customers have
- Rank the tasks, needs and wants in order of relevance and severity for the customer. Note that no product or service will be able to meet all the needs and wants in a customer's profile

[Your answer here]

1. Value Chain → 1.2. End Users → 1.2.2. Socio-cultural Context

GUIDANCE

Describe the socio-cultural and economic context

- **Governance, social structures and organisation**: leadership structures, gender relationships and attitudes toward diversity, roles of different key people in the community and who makes community and household decisions
- **Behaviour**: established practices, community level of trust, social cohesion or conflict, expectations in the delivery of public services versus private
- **Paying**: ability and willingness to pay for services, average income and income variation, access to credit, spending behaviour.

Consider who benefits

- Are there indirect beneficiaries?
- What are the advantages for the broader community, beyond direct beneficiaries?

Governance: The site is rather isolated with little communication exchange with other parts of the country. Purchasing decisions are mostly made by men. Community leaders are older males. The community is made up of two ethnic groups which at times is characterised by tension and mistrust between them. There is limited to total lack of awareness on sustainable energy services.

Behaviour: Cooks are almost always women. Most people cook on open fire with firewood. Poorest families collect fuel but many buy it at the local market, particularly during the season when it is scarce.

Income: Most families are from the pastoral communities with few engaging in small trade. Other income comes from remittances and employment opportunities by camp organisations. Socio-economic assessment to understand energy spending patterns is not known.

Paying: Beneficiaries are used to WFP interventions where they receive goods and money, this may affect their willingness to pay for products that are promoted as part of WFP activities. Every family has access to a mobile phone.

The community at large would benefit from decreased deforestation. Family members would be less exposed to smoke from open fires.

1. Value Chain → 1.2. End Users → 1.2.2. Socio-cultural Context

EXERCISE

Describe the socio-cultural and economic context

- **Governance, social structures and organisation**: leadership structures, gender relationships and attitudes toward diversity, roles of different key people in the community and who makes community and household decisions
- **Behaviour**: established practices, community level of trust, social cohesion or conflict, expectations in the delivery of public services versus private
- **Paying**: ability and willingness to pay for services, average income and income variation, access to credit, spending behaviour.

Consider who benefits

- Are there indirect beneficiaries?
- What are the advantages for the broader community, beyond direct beneficiaries?

[Your answer here]

1. Value Chain → 1.2. End Users → 1.2.3. Distribution Channels

GUIDANCE

Through which channels are users reached in each of the phases of approach?

- Own channels or outsourced?
- How are they reflecting user routines and preferences?)

Describe how each of the client interaction phases will work

- **Awareness:** How can the product/service be promoted? Why?
- **Evaluation:** How can the user try and evaluate the product?
- **Purchase:** How can the user buy the product or service? Is the product affordable to all market segments? How are they paying now for similar products or services and how will they pay? What mode of payment would be preferable to them?
- **Delivery:** How will the end-user receive the product? Is the last mile too expensive? Is the distribution network already present in all parts or do some parts need to be created?
- **After-sale:** What after-sale services are offered to the end-users?

From discussion with the mentor: given that the producers are fairly small and not present in the area, distribution will likely be our sources to local retailer, although there are no existing connections yet.
Awareness: Users can be reached via advertisements placed at strategic locations within the camp. Alternatively, they could be reached via text messaging, since they are registered in the SCOPE system and own mobile phones. Working with street food vendors has the double advantage of reducing large use of fuelwood and ability to demonstrate new cooking technologies.
Evaluation: There could be a rental scheme or the possibility to try the product out for a week before starting to pay.
Purchase: Affordability is a problem, there must be some sort of credit/instalments/PAYGo scheme, plus vouchers for the most vulnerable. Cash or voucher programming could be interesting to explore.
Delivery: Can happen directly at the retailers shops or through mobile sales agents that have access to the last mile. Sales agents are more knowledgeable on the communities social norms, they can also play a crucial role of being the 'face' of the company at camp level. The sales agents could be drawn from the community to enhance the trust relationship with the end-user
After-sale: Text messages will be necessary to follow up on customer satisfaction. A warranty system will be in place and end users will be made aware of its existence. The shops will be collection points in case of malfunction and will also convey user feedback liaising with the producers.

1. Value Chain → 1.2. End Users → 1.2.3. Distribution Channels

EXERCISE

Through which channels are users reached in each of the phases of approach?

- Own channels or outsourced?
- How are they reflecting user routines and preferences?)

Describe how each of the client interaction phases will work

- **Awareness:** How can the product/service be promoted? Why?
- **Evaluation:** How can the user try and evaluate the product?
- **Purchase:** How can the user buy the product or service? Is the product affordable to all market segments? How are they paying now for similar products or services and how will they pay? What mode of payment would be preferable to them?
- **Delivery:** How will the end-user receive the product? Is the last mile too expensive? Is the distribution network already present in all parts or do some parts need to be created?
- **After-sale:** What after-sale services are offered to the end-users?

[Your answer here]

1. Value Chain → 1.2. End Users → 1.2.4. User Relationships

GUIDANCE

- What type of **relationship** does each of the end-user segments expect you to establish and maintain?
- Is your relationship remote, personal, dedicated, community based, co-creation? Can they revisit? Or call? How can you reach them before and after the sale?

Personal relationship is important since the introduction of new technologies will require some level of training on usage. Customers will be able to go back to the shops they bought their products through vouchers, or take their products for repair and/or maintenance or to buy additional products.

There will also be follow up through text messages to check satisfaction and usage. Customers can also be given a toll-free number on which they can report any issues related to the improved cookstoves.

Involvement of the community from early stage can be very useful particularly to identify relevant technologies and on need basis, assist suppliers adapt their products to satisfy the identified needs.

EXERCISE

1. Value Chain → 1.2. End Users → 1.2.4. User Relationships

- What type of **relationship** does each of the end-user segments expect you to establish and maintain?
- Is your relationship remote, personal, dedicated, community based, co-creation? Can they revisit? Or call? How can you reach them before and after the sale?

[Your answer here]

1. Value Chain → 1.3. Delivery Structure → 1.3.1. Key Resources

GUIDANCE

- What physical resources are needed (production facilities, warehouse, distribution vehicles)?
- What human resources are needed (technicians, managers, salesmen)? What intellectual resources are needed (patents, technical know-how)?
- What financial resource are needed?
- What is the initial investment capital (raw materials, products, software) and running costs (salaries, rent)?

The core activity, production of stoves, requires a production centre. The cookstove company has already received support by other development partners to set up its production centre. WFP not having the technical expertise required to support the supply side, should engage with companies who already have key resources established.

The company is located in a highly populated area where the market is strong enough. Then distribution happens from there, as it is outsourced, there is no need for vehicles.

Staff mainly runs the production facility and manages the company. Technical support has been provided by GIZ and other partners."

1. Value Chain → 1.3. Delivery Structure → 1.3.1. Key Resources

EXERCISE

- What physical resources are needed (production facilities, warehouse, distribution vehicles)?
- What human resources are needed (technicians, managers, salesmen)? What intellectual resources are needed (patents, technical know-how)?
- What financial resource are needed?
- What is the initial investment capital (raw materials, products, software) and running costs (salaries, rent)?

[Your answer here]

1. Value Chain → 1.3. Delivery Structure → 1.3.2. Key Activities

GUIDANCE

- What **key activities** does our value proposition require?
- Which are the most important? Which are less important/not essential?
- Would there be an advantage in outsourcing anything?
- Would any of the activities in our value proposition mean changes to authority structures or create conflict? How and why?
- What activities are needed for distribution, commercialization and after-sales services?

Focal activities for a stove manufacturer would be:

1) Research and development (R&D) on the stove model, efficiency, design
2) Production
3) Distribution
4) Commercialization
5) After-sale service and warranty.

Of these, only Production (managing site, labour, purchase of raw materials, orders) is crucial for the manufacturer.

1. Value Chain → 1.3. Delivery Structure → 1.3.2. Key Activities

EXERCISE

- What **key activities** does our value proposition require?
- Which are the most important? Which are less important/not essential?
- Would there be an advantage in outsourcing anything?
- Would any of the activities in our value proposition mean changes to authority structures or create conflict? How and why?
- What activities are needed for distribution, commercialization and after-sales services?

[Your answer here]

1. Value Chain → 1.3. Delivery Structure → 1.3.3. Key Partners

GUIDANCE

- Who are potential **key partners** and what would their role be?
- What partnerships do we need to fulfil our value proposition? (For example, suppliers of equipment, trainers, buyers to reach markets, etc.)
- Why would these partners be interested in supporting our VP? What do they expect from us?

R&D could be performed by a different entity, who specializes in researching on design options and may have more experience and advanced technology at their disposal.

Distribution can also be done through a network of partners. **Transport** companies already covering that route and **wholesalers and retailers** with local presence within the refugee camps that would already have established clients and shops. Wholesalers can stock ICS and distribute the stock to retailers on-demand. These last mile partners can also look at **commercialization**.

Same may apply to **after-sale services** that can be carried out by a local partner instead than directly by the producer whom may be located far away.

Strategic alliance with an **ICT firm** to handle online/mobile payments on PAYGo model will be important to address the affordability barrier. Important to confirm and trial if people will be able to afford the product before implementing any type of pay as you go scheme.

EXERCISE

1. Value Chain → 1.3. Delivery Structure → 1.3.3. Key Partners

- Who are potential **key partners** and what would their role be?
- What partnerships do we need to fulfil our value proposition? (For example, suppliers of equipment, trainers, buyers to reach markets, etc.)
- Why would these partners be interested in supporting our VP? What do they expect from us?

[Your answer here]

GUIDANCE

1. Value Chain → 1.4. Accounting → 1.4.1. Revenue Streams

Where does the revenue come from?

- What type of revenue are you expecting? Asset sale? Subscription fees? Renting?
- Where will the money/ funds come from to pay for everything? Be precise – which sources of money will pay for which cost?
- Can end users (e.g., farmers) pay? If they don't want to, how do we work/ negotiate with them to see the need and the benefit to pay?
- Are there any possible subsidies from the government or other organisations (e.g., funds to support cooperatives on certain activities)? How do we get these?
- Can the community contribute with things other than money (e.g., labour or other in-kind support) to reduce costs? (For example, helping to install or maintain equipment, build infrastructure etc.)
- What must we think about when setting up payment schemes and tariffs? (For example, farmers only have income in certain seasons.)

Revenues are generated from direct sales to customers and PAYGo systems.
Customers pay for improved cookstoves via cash, mobile money and cash vouchers provided by WFP and other UN agencies operating in Mauritania.
It is known from a recent study that customers would be more than willing to pay slightly more if the stoves were delivered at their doorstep (as opposed to having to get them from the market centre a few kilometres away).
Stoves could also be sold on credit where customers could be making payments on weekly or monthly instalments until the full cost is covered. This would be a preferred option for customers on daily or weekly wages.

1. Value Chain → 1.4. Accounting → 1.4.1. Revenue Streams

EXERCISE

Where does the revenue come from?

- What type of revenue are you expecting? Asset sale? Subscription fees? Renting?
- Where will the money/ funds come from to pay for everything? Be precise – which sources of money will pay for which cost?
- Can end users (e.g., farmers) pay? If they don't want to, how do we work/ negotiate with them to see the need and the benefit to pay?
- Are there any possible subsidies from the government or other organisations (e.g., funds to support cooperatives on certain activities)? How do we get these?
- Can the community contribute with things other than money (e.g., labour or other in-kind support) to reduce costs? (For example, helping to install or maintain equipment, build infrastructure etc.)
- What must we think about when setting up payment schemes and tariffs? (For example, farmers only have income in certain seasons.)

[Your answer here]

GUIDANCE

1. Value Chain → 1.4. Accounting → 1.4.2. Financial Costs

What are the most important costs of the delivery model?

- Have we fully calculated all our costs in undertaking the activities identified? Does this include the cost of any inputs (e.g., equipment or fertiliser), operating costs, maintenance or other activity costs (e.g., training of technicians) etc.?
- What are the essential activities needed to make our value proposition work – how much do they cost?
- Which activities would cost the highest? Can we make savings and still deliver the benefit we want?
- Are there any environmental costs (e.g., water pollution) or social costs (e.gg, creating social conflict)? Or benefits (e.g., men or women have more time or more income)?
- Can any cost be optimized in the short and medium term?

Cost of good quality imported materials to produce the stoves are the highest. These costs can be optimised by shipping more volumes by partnering with other businesses to benefit from economies of scale.

Another cost is on training sales representatives drawn from the communities on how to use, troubleshoot in case of malfunction of the stove and, effective sale techniques (key activity). Sales representatives and local retailers, play a crucial role in breaking language barriers as well as cultural norms that come with how the communities prepare their meals. Retailers are therefore a key resource for the company and are assigned weekly/monthly targets.

1. Value Chain → 1.4. Accounting → 1.4.2. Financial Costs

EXERCISE

What are the most important costs of the delivery model?

- Have we fully calculated all our costs in undertaking the activities identified? Does this include the cost of any inputs (e.g., equipment or fertiliser), operating costs, maintenance or other activity costs (e.g., training of technicians) etc.?
- What are the essential activities needed to make our value proposition work – how much do they cost?
- Which activities would cost the highest? Can we make savings and still deliver the benefit we want?
- Are there any environmental costs (e.g., water pollution) or social costs (e.gg, creating social conflict)? Or benefits (e.g., men or women have more time or more income)?
- Can any cost be optimized in the short and medium term?

[Your answer here]

2. Enabling Environment

GUIDANCE

Note all external factors that could affect the value proposition

- Are institutions and their governance conducive? Are existing regulations enforced? Are economic policies and laws hindering or helping?
- How do tax and tariff regimes impact energy services or products?
- What is the state of the infrastructure (roads, mobile network coverage, electricity grid)? What's the cost of services?
- What natural resources are available (is solar an option, wind, biogas)?

Mauritania lacks an elaborate energy policy and regulatory framework. There exists a biomass strategy but its implementation has been ad hoc. Infrastructure is also limited especially in the rural areas where WFP operations are located. Prolonged political instability within the country has over the time negatively impacted national institutions. Critical staff with technical knowhow have been forced to emigrate to other countries thus crippling the effectiveness of such institutions.

Electricity grid is restricted to the capital city and it is very unreliable.

More outreach needs to occur to understand the off-grid energy access market, including cooking technologies and fuels, and any associated policies

2. Enabling Environment

EXERCISE

Note all external factors that could affect the value proposition

- Are institutions and their governance conducive? Are existing regulations enforced? Are economic policies and laws hindering or helping?
- How do tax and tariff regimes impact energy services or products?
- What is the state of the infrastructure (roads, mobile network coverage, electricity grid)? What's the cost of services?
- What natural resources are available (is solar an option, wind, biogas)?

[Your answer here]

GUIDANCE

3. Barriers & Supporting Services

Barriers inhibiting energy service delivery currently?	Proposed supporting services
Awareness: End users might not know that the devices exist or how they can fulfil their needs or might not recognise the need in the first place. For example, they may think that the traditional way of cooking on three stones always worked and there is no need to change	• Organise media campaigns and edutainment programmes • Finance companies' promotion efforts through sales based incentives • Roll out door to door promotion • Allow possibility to trial or rent
Availability: The service may not be present in the area. Similar products but of very low quality may be sold undermining the customers' trust in the solution. Lack of skilled labour and poor supply chains might result in poor maintenance and repair services.	• Provide market assessments & landscaping • Build market linkages between suppliers and local retailers • Design result based incentive scheme • Develop public-private financial models or funds to de-risk private investment • Advocacy with governments for adoption and enforcement of quality standards • Linkages with sector organizations
Accessibility: The service may be available but not accessible to everyone. For example, there may be national grid cables reaching the area but people in slums may not be able to connect	• Introduce subsidy to reduce the cost of extending low-voltage connection lines • Offer connection to the grid • Support off-grid companies to reach the last mile (e.g., through RBF)
Acceptability: the solution needs to be convenient and fit the end users' habits or it will not find a market and will not be adopted.	• Conduct thorough consumers research • Conduct robust trials before scaling up • Avoid free handouts which cannot reveal users' preferences but rather privilege models where users must contribute to the cost or must choose between different options
Affordability: The end users may not be able to pay for the product upfront or at all reducing market demand.	• Introduce cash assistance programming (vouchers schemes on energy products and services) • Facilitate the diffusion of PAYG & pay to use schemes • Design payments scheme in instalments, seasonal payment • Build linkages with local banking, lending institutes, and saving groups • Introduce digital registration to enable end users' access to loans, savings, PAYG solutions and build payment records

GUIDANCE

3. Barriers & Supporting Services

What barriers are currently preventing the service from being delivered?	What supporting services are needed for this energy service to work effectively? Which of these supporting services can be delivered by your organization and its partners?
Lack of market demand due to low affordability limits the interest of the supplier in the project area	Link with financing actors, saving groups, payments in instalments, PAYGO, pay to use, voucher subsidies for most vulnerable
Low awareness	Media campaigns, edutainment
Electricity grid is only available in urban settings	Double strategy for urban/peri urban and rural settings

EXERCISE

3. Barriers & Supporting Services

What barriers are currently preventing the service from being delivered?	What supporting services are needed for this energy service to work effectively? Which of these supporting services can be delivered by your organization and its partners?
[Your answer here]	[Your answer here]
[Your answer here]	[Your answer here]
[Your answer here]	[Your answer here]

Finalize Your EDM Canvas

EXERCISE

Take out key information from the previous slides and add here to complete your Canvas!

3. Supporting Services	1. Value Chain				
	1.3. Delivery Structure		**1.1. Value Proposition**	**1.2. End Users**	
	1.3.3. Key partners:	1.3.2. Key activities: 1.3.1. Key resources:		1.2.2. Socio cultural context: 1.2.4. End user relationships: 1.2.3. Distribution Channels:	1.2.1. End User segments:
	1.4. Accounting				
	1.4.2. Costs:		1.4.1. Benefits:		
	2. Enabling Environment				

CONGRATULATIONS!

You have completed the workbook for Hands-on Design of Energy Delivery Models module!

GPA GLOBAL PLATFORM FOR ACTION

EDM ENERGY DELIVERY MODELS

7 AFFORDABLE AND CLEAN ENERGY

DEVELOPING YOUR ENERGY DELIVERY MODEL PROJECT

Workbook for EDM Module 3

Training delivered by:

unitar United Nations Institute for Training and Research

With support from:

MECS Modern Energy Cooking Services

UKaid from the British people

iied

NORCAP NORWEGIAN CAPACITY OPERATED BY NRC

SELCO FOUNDATION

Developing Your Energy Delivery Model Project

- In EDM **Introduction to Energy Access in Displacement Settings** and **Hands-on Design of Energy Delivery Models** modules, you used the EDM Canvas as a guiding tool to build your project proposal.
- EDM **Developing Your Energy Delivery Model Project** module provides high level, practical guidance for humanitarian field program staff on the steps to developing a project which leverages private sector and sustainable financing mechanisms for delivery of energy services to end-users.
- You will build on your EDM Canvas to further develop your project proposal in EDM **Developing Your Energy Delivery Model Project** module, so make sure you have it handy as move through the sections. The EDM Canvas was developed by IIED and CAFOD, and is accompanied by the EDM Toolkit, a methodology for planning pro-poor energy services. This course is based on the EDM methodology.

How to Use This Workbook?

This workbook accompanies **Developing Your Energy Delivery Model Project** module of the EDM training and contains several tools and templates to be completed by the participant.

If you are taking the facilitated version of the training, each project team has their own workbook stored in **an online shared folder**. Training facilitators and mentors will be tracking your progress through your workbooks, **so please make sure that your workbook in the shared folder is up to date**.

GUIDANCE

Guidance slides

- These slides are designed to complement online learning material and help your thinking process.
- For each step of this training workbook, an example has been included for a fictional energy project.
- Elisabeth is a fictional humanitarian agency field staff based in Mauritania that is taking this training.
- To illustrate the level of detail and an approach to the section, Elisabeth's energy project serves as an example.

EXERCISE

Exercise slides

- These slides contain the main tools used during the project development process and they are to be filled before the workshops.

Table of Contents

STEP	ONLINE LEARNING	SLIDES
Step 1. Describing the background and rationale for your energy project	Lesson 3: Project Background, Goal, Objectives, Outcomes, Activities (Key Proposal Components)	56-59
Step 2. Identifying project goal, objectives, outcomes, and activities	Lesson 3: Project Background, Goal, Objectives, Outcomes, Activities (Key Proposal Components)	60-62
Step 3. Creating Theory of Change, IF/THEN statements	Lesson 3: Project Background, Goal, Objectives, Outcomes, Activities (Key Proposal Components)	63-65
Step 4. Developing project organizational chart	Lesson 4: Project Partnerships, Stakeholder Involvement and Delivery Timeline	66-68
Step 5. Filling in project delivery timeline	Lesson 4: Project Partnerships, Stakeholder Involvement and Delivery Timeline	69-71
Step 6. Producing Key Performance Indicators (KPIs)	Lesson 5: Project Monitoring and Evaluation and Learning	72-75
Step 7. Creating a learning plan	Lesson 5: Project Monitoring and Evaluation and Learning	76-78
Step 8. Pinning down risks and designing a mitigation plan	Lesson 6: Sustainability & Risk	79-84

Training Schedule for the Facilitated Version

EDM TRAINING JOURNEY

ONLINE LEARNING	**Module 1:** Introduction to Energy Access in Displacement	**Module 2:** Hands on Design of Energy Delivery Models (EDMs)	YOU ARE HERE **Module 3:** Sustainable Energy Delivery Model Project Development
INTERACTIVE WORKSHOPS	- Kickoff Workshop - Problem Framing Workshop	- Guidance on pre-feasibility studies - Concrete project examples of Modern Energy Cooking Services	- Sharing Value Chain analysis - Guidance on project development - Innovative financing models	- Tips on developing a project pitch - "Donor Dialogue" session with energy donors and financers
ONE-ON-ONE MENOTRING	Bi-weekly one-on-one guidance sessions with energy			

STEP 1. DESCRIBING THE BACKGROUND AND RATIONALE FOR YOUR ENERGY PROJECT

GUIDANCE

Background

Below are a list of sections you can use to think through your background and project rationale. Information from your EDM Canvas will be essential here.

Problem (Social)	Use your EDM Canvas energy gap and Connection Circle to articulate why lack of sustainable energy access contributes to the overall social issue
Project (Energy solution)	Use your EDM Canvas to build on the 'Energy Solution' section to explain the proposed solution
Target End Users / Beneficiaries	Use your EDM Canvas to build on the 'User Segments' section to describe who the end users are, their preferences and needs, their economic situation (i.e. ability or willingness to pay for an energy service), any gender dynamics, and relevant socio-cultural aspects.
Value Proposition of the Energy Service	Use your EDM Canvas to build on the 'Value Proposition' section, explaining why the sustainable energy service or solution adds value or improves living standard of the end users.
Enabling Environment	Use your EDM Canvas to build on the 'Enabling Environment' section. Consider relevant stakeholders such as local/national government, development and private sector partners.
Baseline Data	Use your EDM Canvas to build on the 'Socio-cultural Context' section, and consider adding any quantitative information you may have from socio-economic assessments or energy pre-feasibility / market assessments *For example, % people with access to energy, % with willingness/ability to pay for energy services, % or number of businesses with access to electricity, % income currently spending on energy…*

GUIDANCE

Background

Below are a list of sections you can use to think through your background and project rationale. Information from your EDM Canvas will be essential here.

Problem (Social)	Refugee households in Mauritania are eating insufficient nutritious foods due to a large amount of the WFP cash transfer being used to buy firewood instead.
Project (Energy solution)	Market-based energy-efficient cookstoves available for refugee households in Mauritania.
Target End Users / Beneficiaries	Refugee households living in camps.
Value Proposition of the Energy Service	The solution could be a range of cookstoves (at different prices to cover all possible customers) that the end users would have access to purchase. The cookstove models should have much higher fuel savings, so families would use less firewood to cook - meaning they spend less on fuel, can save time, have health benefits (because there is less smoke from cooking). The more expensive models will also have an attractive, modern look which would be appealing to the end users. Some models will also have the possibility to charge lights as well as mobile phones.
Enabling Environment	Mauritania lacks an elaborate energy policy and regulatory framework. There exists a biomass strategy, but its implementation has been ad hoc. Infrastructure is also limited especially in the rural areas where WFP operations are located. Prolonged political instability within the country has over time negatively impacted national institutions. Critical staff with technical knowhow have been forced to emigrate to other countries thus crippling the effectiveness of such institutions. Electricity grid is restricted to the capital city, and it is very unreliable. More outreach needs to occur to understand the off-grid energy access market, including cooking technologies and fuels, and any associated policies.
Baseline Data	Current cooking technology/fuel costs; new stove/fuel options available in Mauritania, companies selling, cost; camp access for companies; refugee ability/willingness to pay; other similar projects in design by other implementers/donors.

Background

EXERCISE

Below are a list of sections you can use to think through your background and project rationale. Information from your EDM Canvas will be essential here.

Problem (Social)	[Your answer here]
Project (Energy solution)	[Your answer here]
Target End Users / Beneficiaries	[Your answer here]
Value Proposition of the Energy Service	[Your answer here]
Enabling Environment	[Your answer here]
Baseline Data	[Your answer here]

STEP 2. IDENTIFYING PROJECT GOAL, OBJECTIVES, OUTCOMES, AND ACTIVITIES

GUIDANCE

Project Goal, Objectives, Outcomes, and Activities

What is the problem you are trying to solve?	What key interventions/activities are needed to bring about change?	What are your objectives?	What are your outcomes?	What is your goal/ultimate impact?
Refugee households in Mauritania are eating insufficient nutritious foods due to a large amount of the WFP cash transfer being used to buy firewood instead.	Conduct an assessment to understand customer needs, ability and willingness to pay, market, and appropriate minimum subsidy level.	Identify customer needs & ability to pay for quality cookstoves + fuel.	Improved cooking conditions (health, safety, time) and reduced environmental impact from broad purchase and use of quality cookstoves + fuel in refugee camps.	Quality, efficient, clean, affordable cookstoves + fuel available over the long-term to refugee households.
	Engage private sector cookstove companies to understand their needs and challenges with selling in refugee camps.	Design minimum subsidy level to meet customer needs and financial abilities.		
	Engage private sector training partner to deliver trainings & recipes for customers to ensure uptake.	Identify private sector companies interested in selling quality cookstoves + fuel to refugee camps.		
	Engage UNHCR and Gov of Mauritania for support and access to the camp for the companies.			
	Secure grant funding for subsidy.	Design and implement a project that provides minimum subsidy for private sector companies to sell sustainably in refugee camps.		

EXERCISE

Project Goal, Objectives, Outcomes, and Activities

What is the problem you are trying to solve?	What key interventions/activities are needed to bring about change?	What are your objectives?	What are your outcomes?	What is your goal/ultimate impact?
[Your answer here]	[Your answer here]	[Your answer here]	[Your answer here]	[Your answer here]
[Your answer here]	[Your answer here]	[Your answer here]	[Your answer here]	[Your answer here]
[Your answer here]	[Your answer here]	[Your answer here]	[Your answer here]	[Your answer here]

STEP 3. CREATING THEORY OF CHANGE, IF/THEN STATEMENTS

GUIDANCE

Theory of Change – If/Then Statements

Create a testable “if/then” statement that describes the goal and outcomes that will result from your program. Make sure each step/intervention/activity can be linked to objectives and outcomes. If it cannot, revisit and refine until your “if/then” statement is complete for the entire proposed energy project or energy delivery model.

IF My Agency conducts an assessment to understand customer needs, ability and willingness to pay, market, and appropriate minimum subsidy level, engages private sector solar companies to understand their needs and challenges with selling in refugee camps, engages a private training provider to ensure customers use the new cookstove, engages UNHCR and the Government of Mauritania for support and access to the camp for the companies, and secures grant funding for cookstove + fuel subsidy.

THEN there will be improved cooking conditions (health, safety, time) and reduced environmental impact from broad purchase and use of quality cookstoves + fuel in refugee camps.

THEREBY enabling quality, efficient, clean, affordable cookstoves + fuel available over the long-term to refugee households.

Theory of Change – If/Then Statements

EXERCISE

Create a testable “if/then” statement that describes the goal and outcomes that will result from your program. Make sure each step/intervention/activity can be linked to objectives and outcomes. If it cannot, revisit and refine until your “if/then” statement is complete for the entire proposed energy project or energy delivery model.

[Your answer here]

STEP 4. DEVELOPING PROJECT ORGANIZATIONAL CHART

GUIDANCE

Project Organizational Chart

List the core activities of the project in the left-hand column. Alongside each one, detail who needs to be responsible, accountable, support, consulted or informed. Consider the expertise available inside your team, and your organization more broadly, as well as the value that external partners will be able to bring.

(Credit: Adapted from Shell Enter Energy)

Activity/Component	Responsible	Accountable	Supports	Consulted	Informed
Engage energy expert to carry out assessment	Elisabeth	Elisabeth			Gov of Mauritania, my management
Conduct assessment	Elisabeth - manage contract	Contractor (energy expert)	Contract staff in my agency, Junior staff on my team; UNHCR (access for consultant)	UNHCR, other NGOs working on related projects	Gov of Mauritania, my management
Engage private sector cooking companies	Elisabeth, junior staff	Elisabeth, junior staff			My management
Engage private sector training partner	Elisabeth, junior staff	Elisabeth, junior staff			My management
Engage UNHCR and Gov of Mauritania for support and camp access	Elisabeth, my management (if necessary)	Elisabeth	Junior staff on my team	My management	My management
Secure grant funding	Elisabeth, Partnerships team	Elisabeth, Partnerships team	Junior staff, budget staff	My management	My management

EXERCISE

Project Organizational Chart

List the core activities of the project in the left-hand column. Alongside each one, detail who needs to be responsible, accountable, support, consulted or informed. Consider the expertise available inside your team, and your organization more broadly, as well as the value that external partners will be able to bring.

(Credit: Adapted from Shell Enter Energy)

Activity/Component	Responsible	Accountable	Supports	Consulted	Informed
[Your answer here]	[Your answer here]	[Your answer here]	[Your answer here]	[Your answer here]	[Your answer here]
[Your answer here]	[Your answer here]	[Your answer here]	[Your answer here]	[Your answer here]	[Your answer here]
[Your answer here]	[Your answer here]	[Your answer here]	[Your answer here]	[Your answer here]	[Your answer here]
[Your answer here]	[Your answer here]	[Your answer here]	[Your answer here]	[Your answer here]	[Your answer here]
[Your answer here]	[Your answer here]	[Your answer here]	[Your answer here]	[Your answer here]	[Your answer here]

STEP 5. FILLING IN PROJECT DELIVERY TIMELINE

GUIDANCE

Project Delivery Timeline

Look at your Key Activities, write down when they will occur by quarters or months. Consider context-specific events that can impact your timeline (e.g. holidays, rainy seasons, budget cycles, etc.).

The format of the timeline is up to you. Common formats are a Gantt chart or spreadsheet. There are tools, such as TimelineJS, which can help you turn your spreadsheet timeline into a visual story.

Activity	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Engage energy expert to carry out assessment				
Conduct assessment				
Engage private sector cooking companies				
Engage private sector training partner				
Engage UNHCR and Gov of Mauritania for support and camp access				
Secure funding and financing				

EXERCISE

Project Delivery Timeline

Look at your Key Activities, write down when they will occur by quarters or months. Consider context-specific events that can impact your timeline (e.g. holidays, rainy seasons, budget cycles, etc.).

The format of the timeline is up to you. Common formats are a Gantt chart or spreadsheet. There are tools, such as TimelineJS, which can help you turn your spreadsheet timeline into a visual story.

Activity	Quarter 1	Quarter 2	Quarter 3	Quarter 4
[Your answer here]				
[Your answer here]				
[Your answer here]				
[Your answer here]				
[Your answer here]				

STEP 6. PRODUCING KEY PERFORMANCE INDICATORS (KPIs)

GUIDANCE

Key Performance Indicators

An indicator plan is a key tool for project monitoring efforts, providing details such as what will be collected, from whom, how, who will do it, how often, etc. The indicator plan builds upon the theory of change and program proposal. While formats vary, the minimum following information should be included:

'Inclusive Energy Indicator Menu and Plan Template', Mercy Corps

Indicator	Definition [WHAT will be monitored?]	Data Collection Sources & Methods [HOW will it be monitored?]	Frequency of Data Collection [WHEN will it be monitored?]	Person(s) Responsible [WHO will monitor?]	Method of Analysis [HOW will it be analyzed?]	Information Use [WHY is it monitored?]
Number of beneficiaries with improved energy services as a result of program intervention	Includes electricity connections, solar lanterns, kits. Disaggregate by product/sex/age/refugee/host community.	Program records, monitoring data	At the beginning & end of the project	My agency	Program records, monitoring data	Impact on energy access
Proportion of homes with indoor air quality that is Tier 2 or higher according to ESMAP multi tier index	Total ESMAP measurement focusing on emissions from cooking.	Ongoing activity tracking	At the end of the project	My agency	Program records, monitoring data	Health, Energy Access
Number and proportion of program beneficiaries that are female	% of program beneficiaries that are female. Beneficiaries are those who come into direct contact with the set of interventions provided by the program in each technical area.	Ongoing activity tracking	At the end of the project	My agency	Program records, monitoring data	Inclusion
Percentage of people who perceive a positive change in their well-being after using the cooking stove + fuel	Secondary positive outcomes related to solar use and adoption that may result from shifts in household economic stability, time use, and health that are related to clean energy adoption and use.	Response to data collection questions: Since adopting/using the [clean energy product] have there been any changes in your sense of well-being? (Likert scale)	At the end of the project	My agency	Monitoring data	Energy Access, Empowerment

GUIDANCE

Key Performance Indicators - Continued

An indicator plan is a key tool for project monitoring efforts, providing details such as what will be collected, from whom, how, who will do it, how often, etc. The indicator plan builds upon the theory of change and program proposal. While formats vary, the minimum following information should be included:

'Inclusive Energy Indicator Menu and Plan Template', Mercy Corps

Indicator	Definition [WHAT will be monitored?]	Data Collection Sources & Methods [HOW will it be monitored?]	Frequency of Data Collection [WHEN will it be monitored?]	Person(s) Responsible [WHO will monitor?]	Method of Analysis [HOW will it be analyzed?]	Information Use [WHY is it monitored?]
Average share of income spent on fuel and/or electricity per household	One of the main pathways through which clean energy solutions can impact household economic stability is through changes in the amount of money spent on fuel. The change depends on what type and how much fuel was previously used.	Household survey of previous cooking situation and current cooking situation with expenditure comparison.	At the beginning & end of the project	My agency	Monitoring data	Energy Access, Economic
Percentage of women, girls, men and boys fearful of experiencing GBV relative to baseline	Fear of GBV can limit the ability of women/girls to participate actively in economic, social, and political activities in and outside the home. Being "fearful of experiencing GBV" may be defined as feeling threatened or in danger of GBV, including but not limited to domestic violence, rape, harassment, trafficking and exploitation.	Survey	At the end of the project	My agency	Monitoring data	GBV risk mitigation

EXERCISE

Key Performance Indicators

An indicator plan is a key tool for project monitoring efforts, providing details such as what will be collected, from whom, how, who will do it, how often, etc. The indicator plan builds upon the theory of change and program proposal. While formats vary, the minimum following information should be included:

'Inclusive Energy Indicator Menu and Plan Template', Mercy Corps

Indicator	**Definition [WHAT will be monitored?]**	**Data Collection Sources & Methods [HOW will it be monitored?]**	**Frequency of Data Collection [WHEN will it be monitored?]**	**Person(s) Responsible [WHO will monitor?]**	**Method of Analysis [HOW will it be analyzed?]**	**Information Use [WHY is it monitored?]**
[Your answer here]	[Your answer here]	[Your answer here]	[Your answer here]	[Your answer here]	[Your answer here]	[Your answer here]
[Your answer here]	[Your answer here]	[Your answer here]	[Your answer here]	[Your answer here]	[Your answer here]	[Your answer here]
[Your answer here]	[Your answer here]	[Your answer here]	[Your answer here]	[Your answer here]	[Your answer here]	[Your answer here]

STEP 7. CREATING A LEARNING PLAN

GUIDANCE

Learning Plan

1. Identify your expected lessons learned
   - What makes your project unique?
   - Any KPIs relevant to learnings?
   - Learnings relevant to specific stakeholders?
2. Identify audiences that would benefit from your learnings
3. Identify how the lessons learned can be disseminated during and after your project.

Expected lessons learned:

- Project design for market-based cookstoves + fuel in the Sahel
- How the subsidy level was determined and impact on sales
- Sales, including disaggregated by sex, age, refugee/host community
- Level of indoor air quality improvement
- Experiences of the companies in selling in refugee camps (will they continue operating?)

Audiences:

- Donors/funders, Clean Cooking Alliance, cookstove companies

Dissemination of learnings:

- Report on learnings and fact sheet with key highlights
- Webinar with UNHCR, private companies, refugee customer
- Blog published in a respected site/platform
- Internal engagement with colleagues – engage communications staff for inclusion in internal newsletter, offer webinar for internal colleagues

Learning Plan

EXERCISE

1. Identify your expected lessons learned
   - What makes your project unique?
   - Any KPIs relevant to learnings?
   - Learnings relevant to specific stakeholders?
2. Identify audiences that would benefit from your learnings
3. Identify how the lessons learned can be disseminated during and after your project.

Expected lessons learned:

[Your answer here]

Audiences:

[Your answer here]

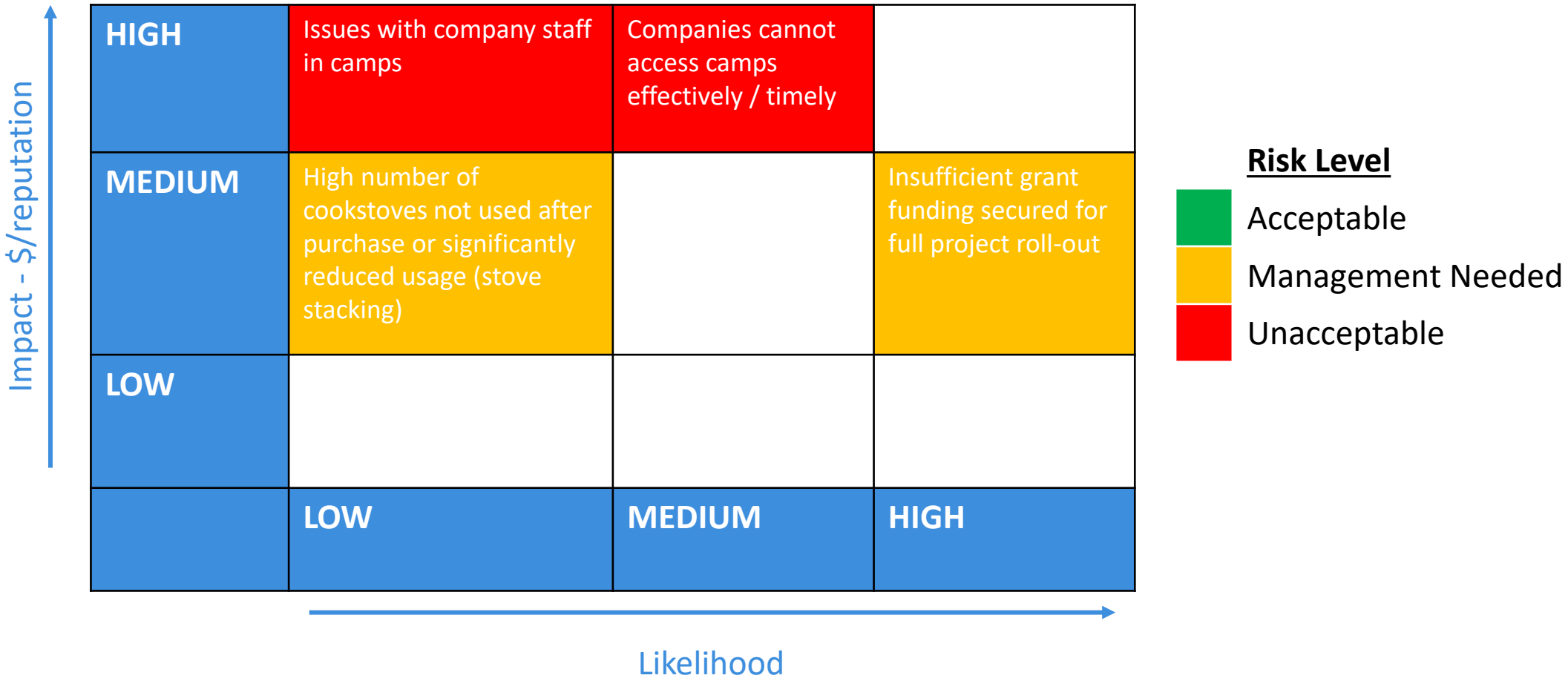
Dissemination of learnings:

[Your answer here]

STEP 8. PINNING DOWN RISKS AND DESIGNING A MITIGATION PLAN

Risk Matrix

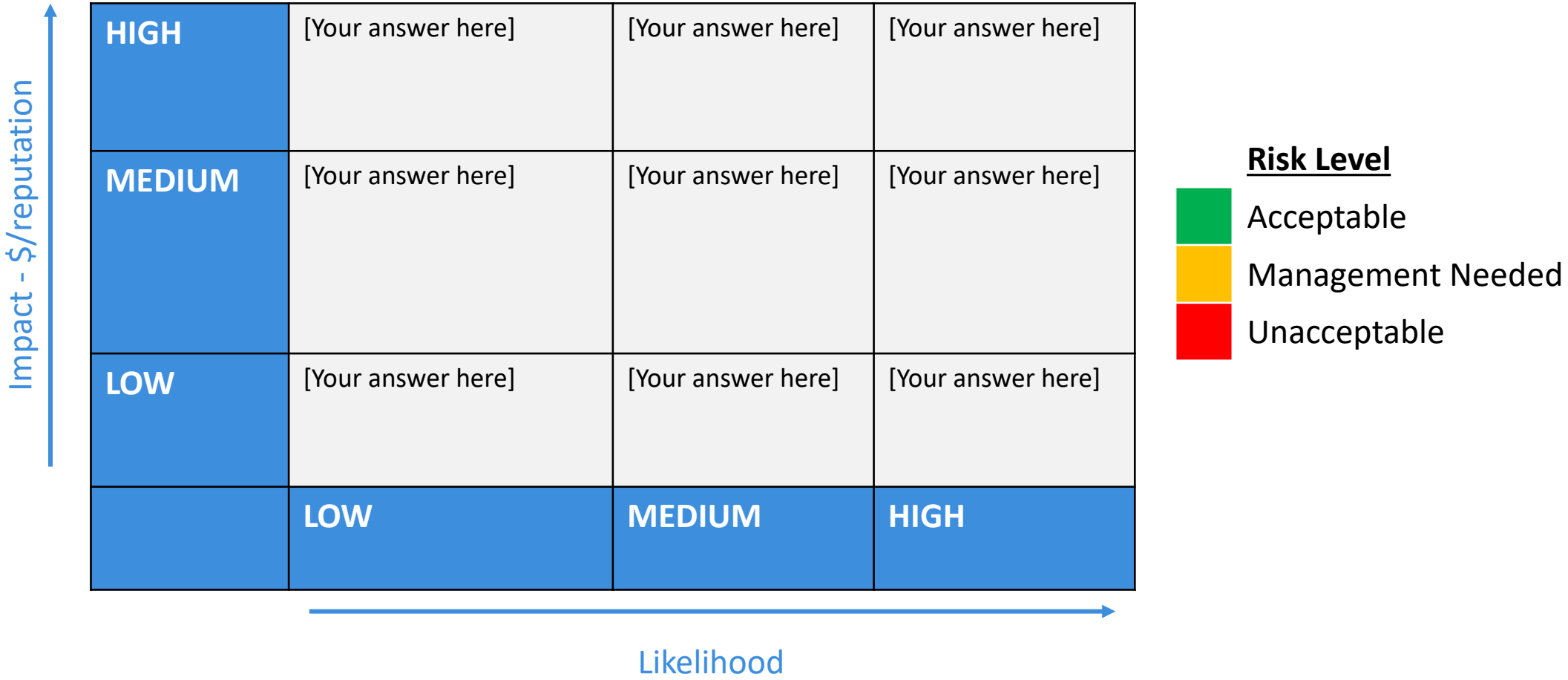
Consider what could undermine your project and explore how likely and severe they are.



Risk Matrix

EXERCISE

Consider what could undermine your project and explore how likely and severe they are.



GUIDANCE

Risk Mitigation Plan

Describe what can be done to manage or mitigate the risks you identified.

Risk	Mitigation
Issues with company staff in camps	• Ensure companies have trainings for staff that will enter the camps. • Engage iNGOs and camp management for feedback on how company staff behave, including asking for feedback from refugees.
Companies cannot access camps effectively / timely	• Engage early and often with UNHCR and the Government.
High number of cookstoves not used after purchase or significantly reduced usage (stove stacking)	• Ensure training and recipe book developed and delivered with user input. • Follow-up visits by my agency and trainers to address any usage concerns / questions.
Insufficient grant funding secured for full project roll-out	• Engage early with my agency partnership staff to develop a plan for donor/funder engagement. • Clearly define the budget and resources and communicate that to potential funders. • If it looks unlikely to secure the full budget, revisit work plan and timeline to create project stages to meet the budget available.

EXERCISE

Risk Mitigation Plan

Describe what can be done to manage or mitigate the risks you identified.

Risk	Mitigation
[Your answer here]	[Your answer here]
[Your answer here]	[Your answer here]
[Your answer here]	[Your answer here]
[Your answer here]	[Your answer here]

CONGRATULATIONS!

You have completed the workbook for Developing Your Energy Delivery Model Project module!

GPA GLOBAL PLATFORM FOR ACTION

EDM ENERGY DELIVERY MODELS

7 AFFORDABLE AND CLEAN ENERGY

DEVELOPING YOUR ENERGY DELIVERY MODEL PROJECT

Mountain of Tomorrow Exercise

Training delivered by:

unitar United Nations Institute for Training and Research

With support from:

MECS Modern Energy Cooking Services

UKaid from the British people

iied

NORCAP NORWEGIAN CAPACITY OPERATED BY NRC

SELCO FOUNDATION

Key Questions to Consider

These questions are intended to be used as a checklist to help frame your project. **Refer to your EDM Canvas and Connection Circle** for the necessary information.

Every project has their own challenges that need to be tackled. Here are a set of questions to help you think about these challenges beforehand during your project design process. The ultimate aim should be to design financially, socially, and environmentally sustainable and high quality energy projects that meet the needs of the end users and support local development.

- ❑ Do you have your baseline information? Is your solution meets the end user needs/demands?
  - ❑ What is the size of your end user group?
  - ❑ What type of energy is already being used? How is the energy sourced currently?
  - ❑ Why is it a problem?
  - ❑ How much does the energy cost now? Are people paying for it?
  - ❑ Are you end users) able and willing to pay for a different energy service?
- ❑ Do you have a good understanding of the local energy market?
- ❑ Have you coordinated with the local/national government?
- ❑ Do you have a landscape of the right local partners for implementing the project?
- ❑ How do you envision the energy service is delivered to the end user?
- ❑ Have you considered how to coordinate operations and maintenance activities?
- ❑ Have you considered how to fund/finance your project?
- ❑ If you are considering a new type of financing, what support do you need to develop the business case for your project?

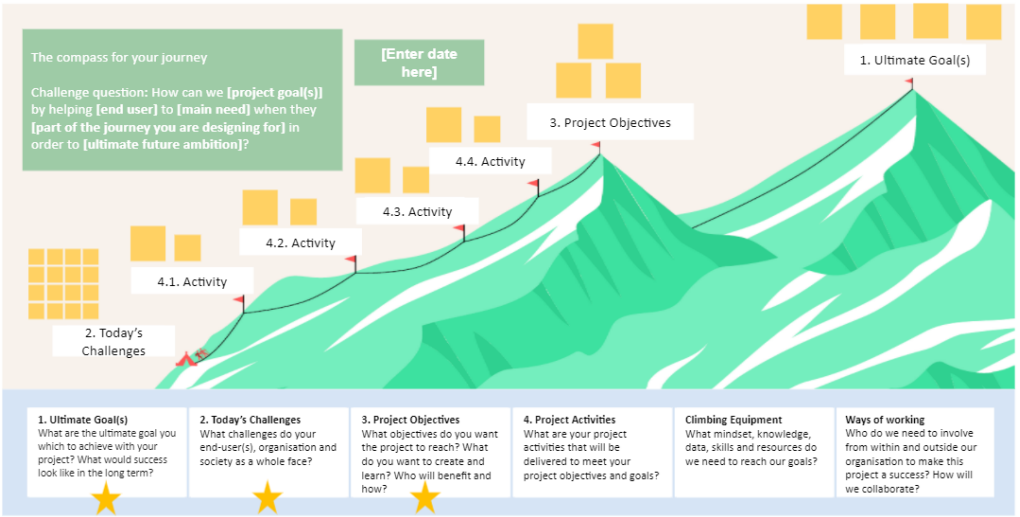
Mountain of Tomorrow

[Link to Template]

Mountain of Tomorrow is a tool to help you define the scope of your innovative energy projects.

It is used to identify

- your organisation's ultimate ambition,
- the challenges that prevent you face as an organisation,
- the goal of your project,
- activities that you need to undertake to reach your goal,
- mindset, data, skills, and resources that can help you reach your goal, and
- partnerships that you need to form to make your project a success.



To complete this exercise:

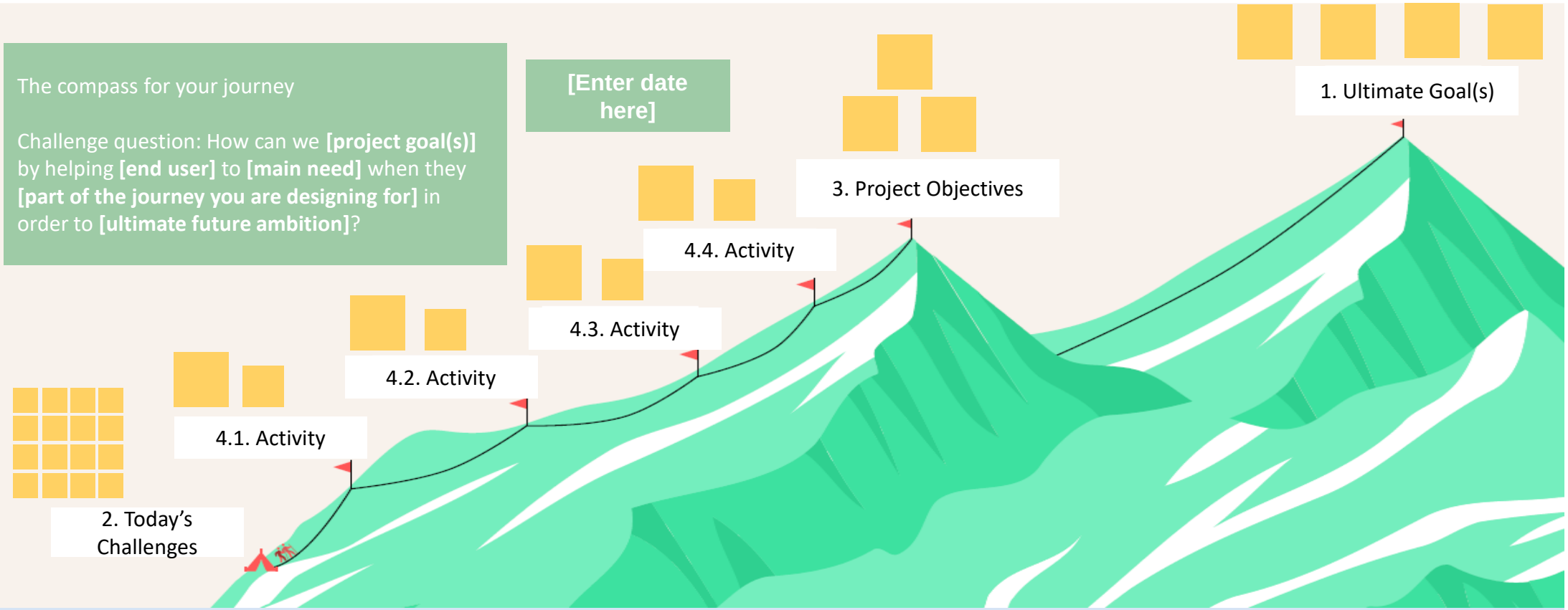
- ❑ Fill out the green text boxes with brackets [Your answer] in Slide 6
- ❑ Answer the questions in Slides 5-10

Mountain of Tomorrow

The compass for your journey

Challenge question: How can we **[project goal(s)]** by helping **[end user]** to **[main need]** when they **[part of the journey you are designing for]** in order to **[ultimate future ambition]**?

[Enter date here]



1. Ultimate Goal(s) What are the ultimate goal you which to achieve with your project? What would success look like in the long term?	**2. Today's Challenges** What challenges do your end-user(s), organisation and society as a whole face?	**3. Project Objectives** What objectives do you want the project to reach? What do you want to create and learn? Who will benefit and how?	**4. Project Activities** What are your project activities that will be delivered to meet your project objectives and goals?	**Climbing Equipment** What mindset, knowledge, data, skills and resources do we need to reach our goals?	**Ways of working** Who do we need to involve from within and outside our organisation to make this project a success? How will we collaborate?

1. Ultimate Goal

*Refer primarily to your **Connections Circle**.*

What are the ultimate goal you which to achieve with your project? What would success look like in the long term?

[Your answer here]

2. Today's Challenges

*Refer primarily to the **Barriers, End Users, and Accounting** sections of your EDM Canvas and your **Connections Circle**.*

What challenges do your end-user(s), organisation and society as a whole face?

[Your answer here]

3. Project Objectives

*Refer primarily to the **Supporting Services and Value Chain** section of your EDM Canvas.*

What objectives do you want the project to reach? What do you want to create and learn? Who will benefit and how?

[Your answer here]

4. Project Activities

*Refer primarily to the **Supporting Services** section of your EDM Canvas.*

What are your project activities that will be delivered to meet your project objectives and goals?

[Your answer here]

5. Climbing Equipment

What mindset, knowledge, data, skills and resources do we need to reach our goals?

[Your answer here]

6. Ways of Working

Who do we need to involve from within and outside our organisation to make this project a success? How will we collaborate?

[Your answer here]

Open Questions

What questions do you have for peers and mentors about your project approach?

[Your answer here]

THANK YOU FOR COMPLETING THE MOUNTAIN OF TOMORROW EXERCISE!

Please get in touch with your mentors to continue working on your project.