Making Project Plans using PCM methods

～From Problem Analysis to Project Formulation～

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Self introduction for ice breaking

Who am I? Who are the participants?

⇒Your name, hometown the most favorite food, movies

Attention!

Good points of this workshop: Practical workshop with group discussions on case studies. You can obtain ability of creating projects.

I require you the following points

- Proactive participation
  ⇒proactively participate in the group work,
- No vertical relations in discussions
  ⇒No boss, no employee here. Everyone is equal.
- Don’t criticize others’ opinions in creating ideas.

Schedule of this workshop

Day 1

09:00 – 09:10 Introduction

09:10 – 09:30 What is Project Cycle Management?

09:30 – 10:00 Problem Analysis (Case study)

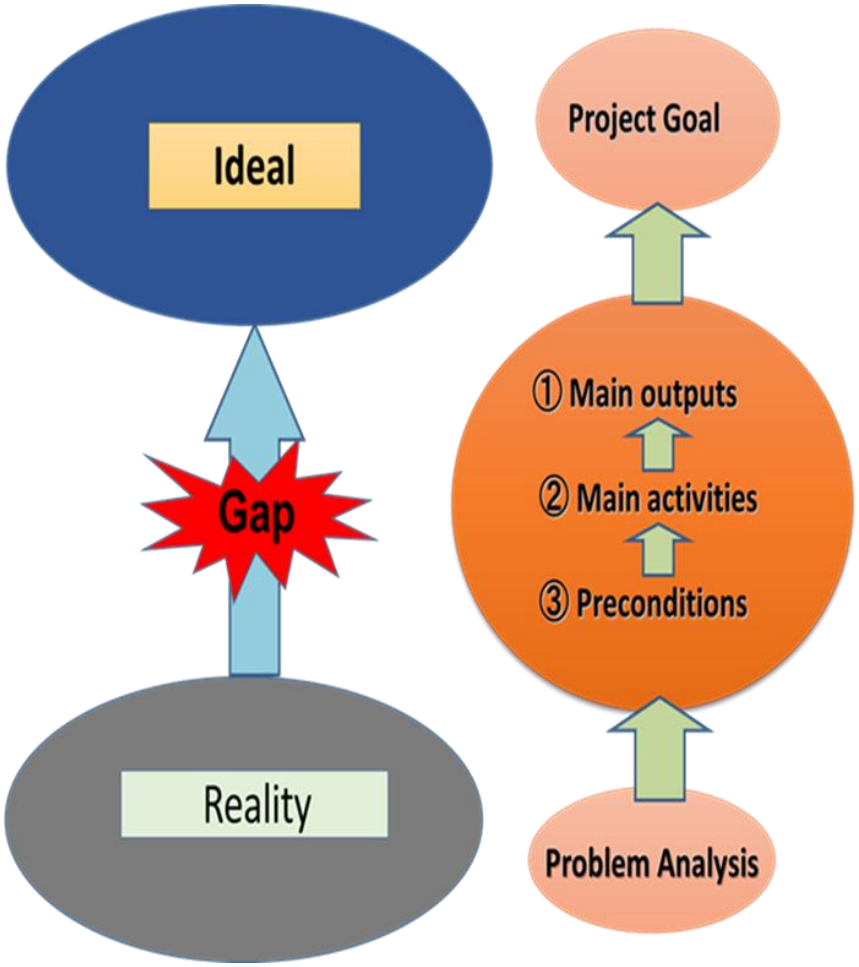
10:00 – 11:00 Problem Tree Making (Group work)

11:00 – 11:15 Break Time

11:15 – 12:00 Solution Analysis (Group work)

What is “Project”?

Project is the series of activities that fill the gap between reality and Ideal



Project goal will be attained by producing all outputs.

You implement series of activities to make outputs.

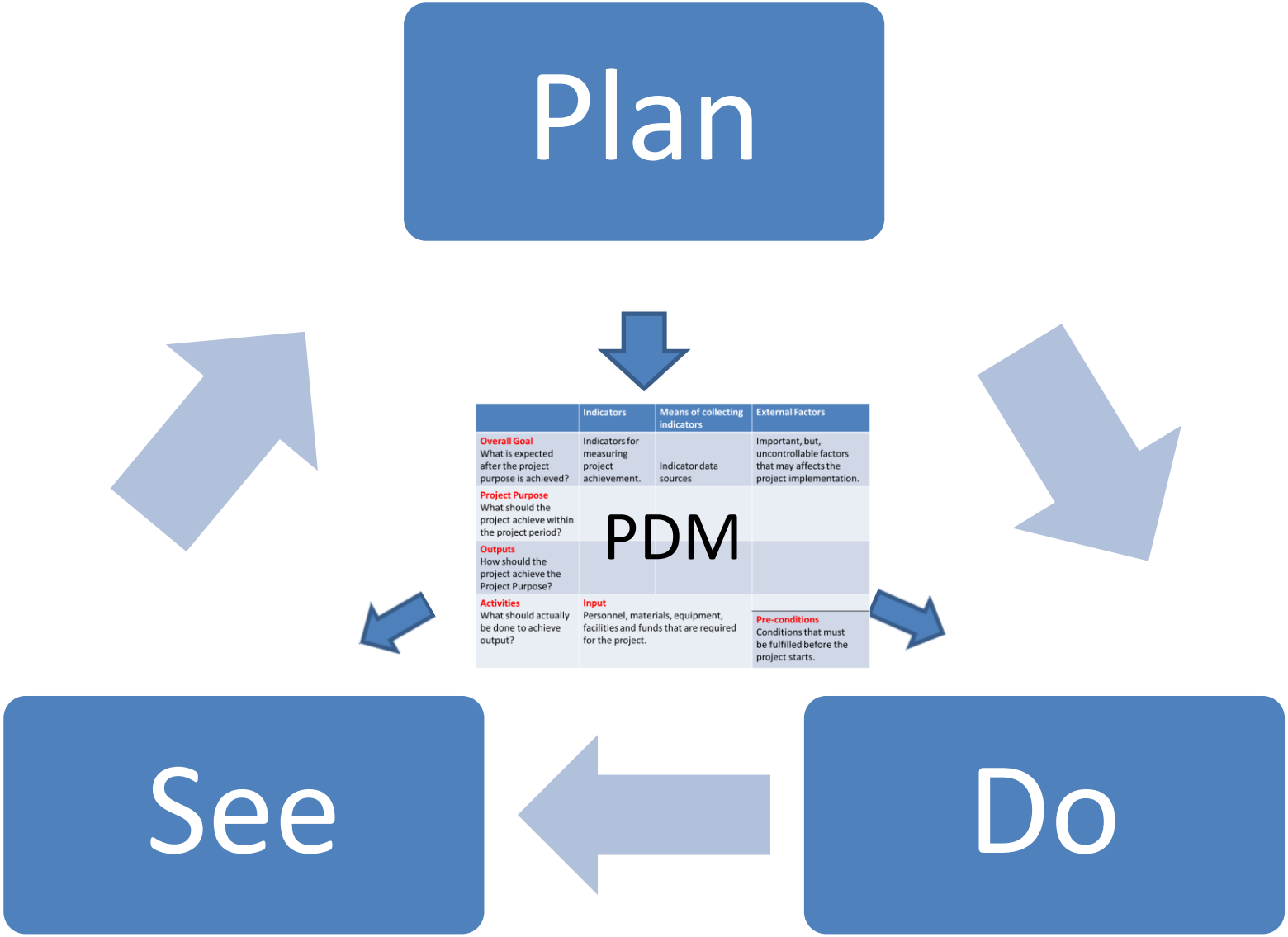
In precondition you get approval of plans, obtain resources（manpower, technologies and budget.）

Problem is a situation, person, or thing that is insufficient, not functioning and needs to be dealt with or solved:

What is PCM（Project Cycle Management）?

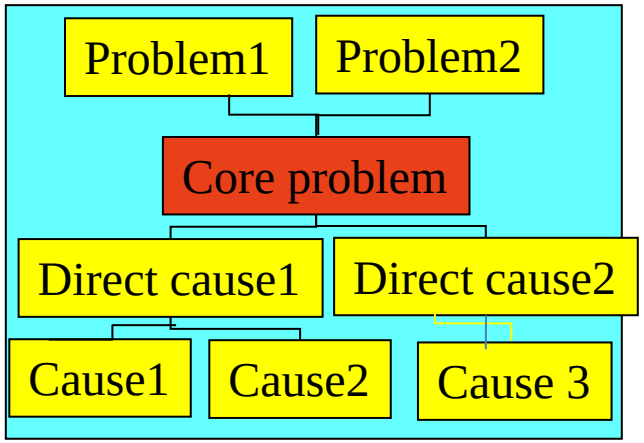
A method of managing project cycles of planning, implementation, and evaluation using a project summary table called PDM (Project Design Matrix).

PDM administrates PCM

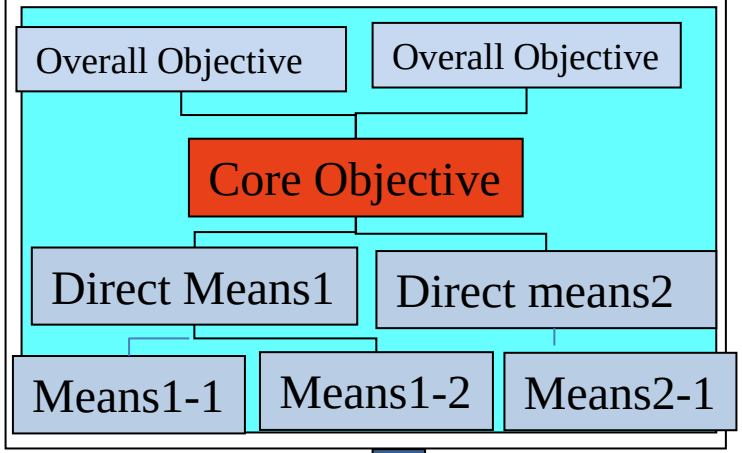


5 Steps for Project Formulation

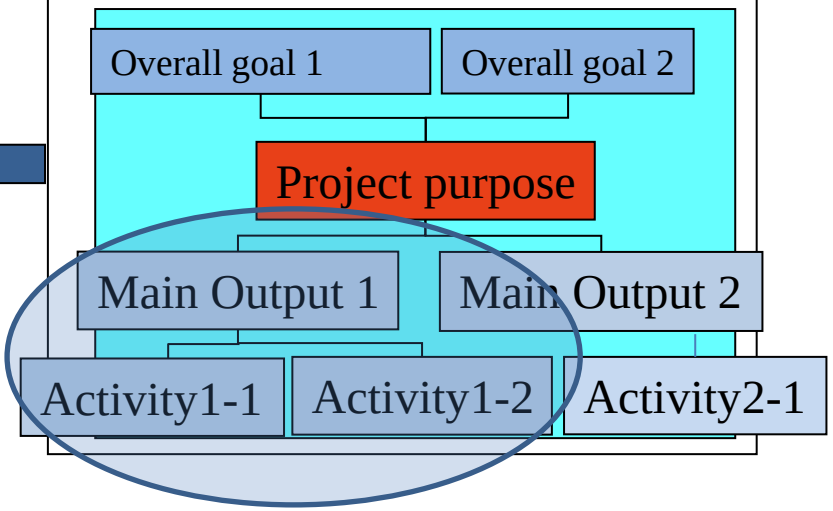
1. Problem Analysis



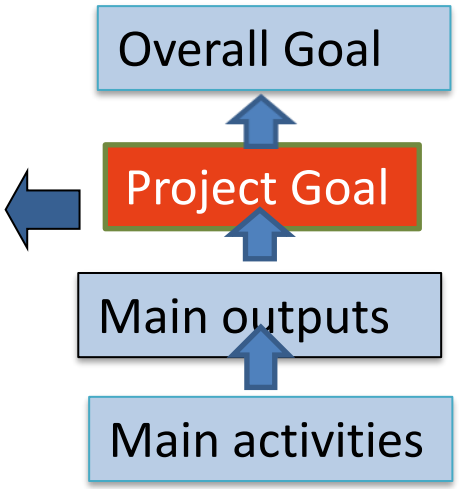
2. Solution Analysis



3.Project Identification



4.Logic Modeling



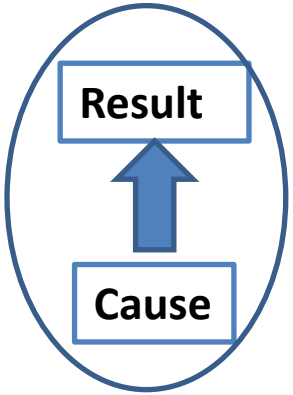
5.Creation of PDM

	Indicators 指標	Means of collecting indicators	External Factors 外部条件
Overall Goal 上位目標 What is expected after the project purpose is achieved?	Indicators for measuring project achievement.	Indicator data sources	Important, but, uncontrollable factors that may affects the project implementation.
Project Purpose What should the project achieve within the project period?			
Outputs アウトプット How should the project achieve the Project Purpose?			
Activities 活動 What should actually be done to achieve output?	**Input** 投入 Personnel, materials, equipment, facilities and funds that are required for the project.		**Pre-conditions** 前提条件 Conditions that must be fulfilled before the project starts.

1. What is Problem Analysis?

To logically analyze the problems in “cause-result” co-relationship and summarize them in a tree-shaped diagram. This is the most important process in PCM.

Why can’t I study abroad? A case of a student



I can’t study abroad

I have insufficient fund for study abroad

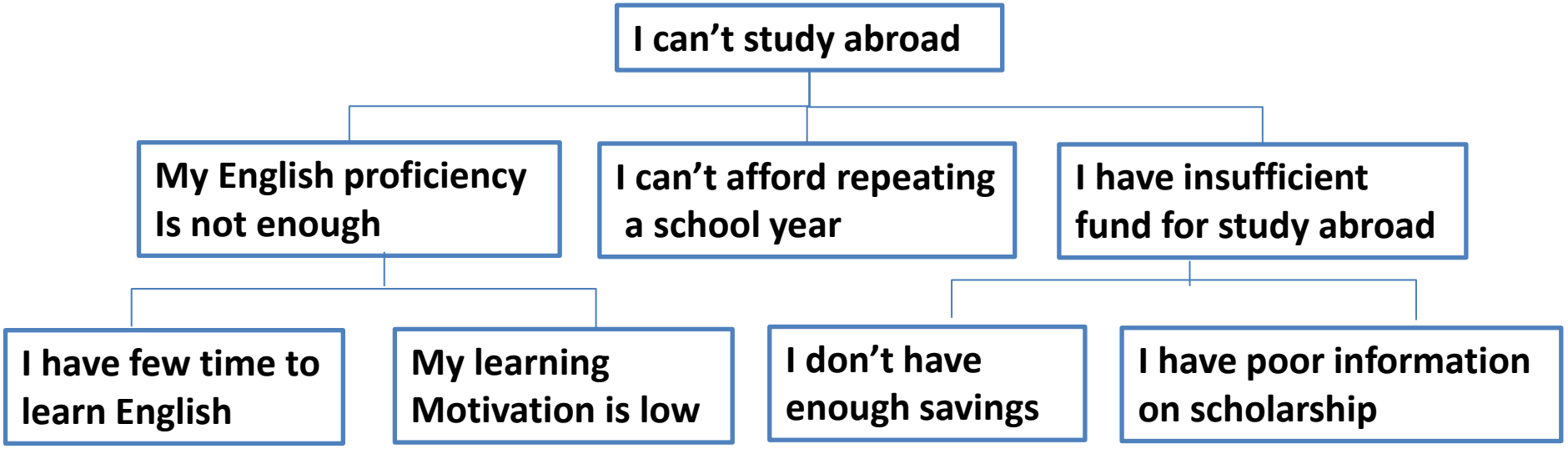
My English proficiency Is not enough

I can’t afford to repeating a school year

Let’s put the following cards in order in accordance with “cause-result” order!

Why can’t I study abroad? A case of a student

It goes like this!

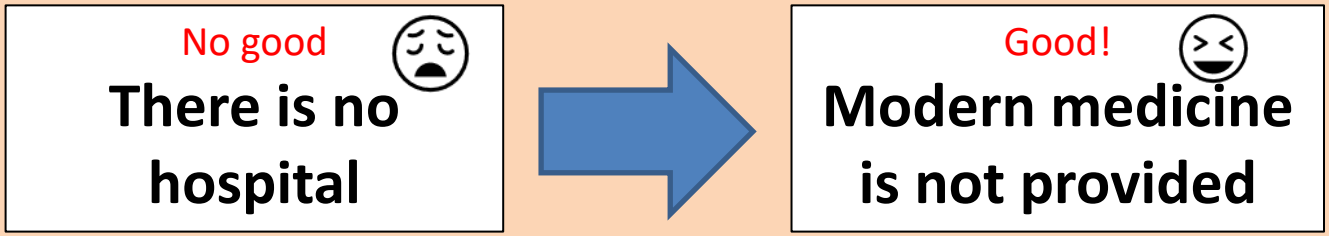


How to make problem trees

① Find out various problems. If you come up with an idea, write it down on the card quickly as many as possible. Quantity is more important than quality in writing cards.

② Write one problem on one card. Write ideas in short sentence, but not in noun nor phrase.

③ Describe the problem in negative expression. Avoid the phrase “there is no…”. Instead, describe a negative situation.



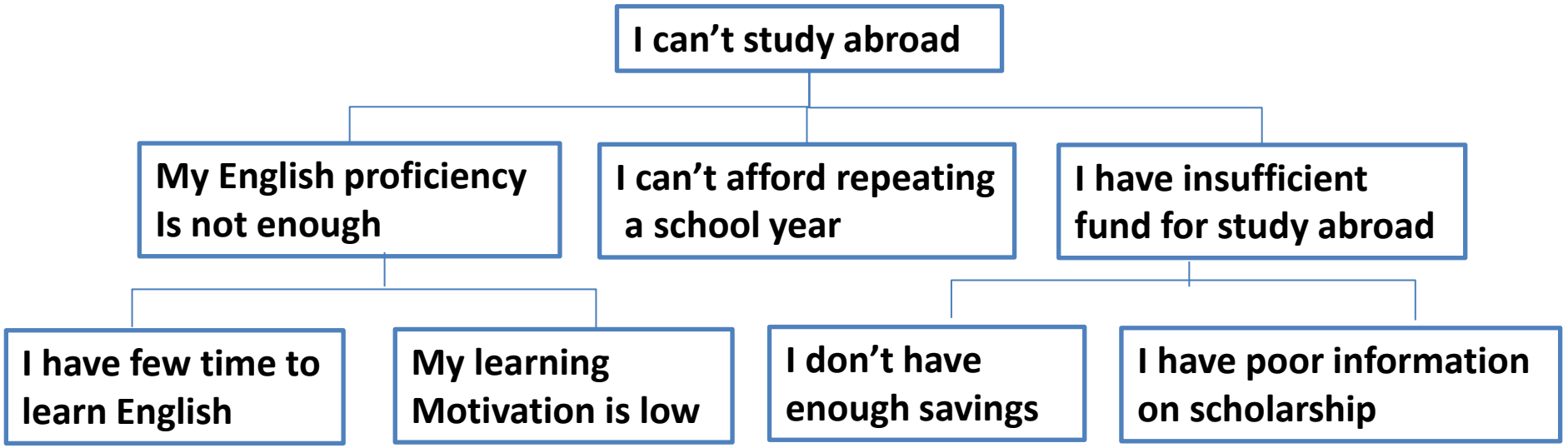
How to make problem trees

④ You must not criticize other's card nor opinion, since criticism stop free flow of ideas.

⑤ Put the cards on the board, discussing cause and result relations in the group.

⑥ If the cause-result relations is right, link them by line.

Why can't I study abroad? A case of a student



Let’s try to make a problem tree!

I opened a bakery shop in Dushanbe suburban area, but I haven’t had many customers coming in since the opening. The shop locates rather far from the main street, surrounded by households with many children. According to my friends the price of our products are rather high and not attractive to children.

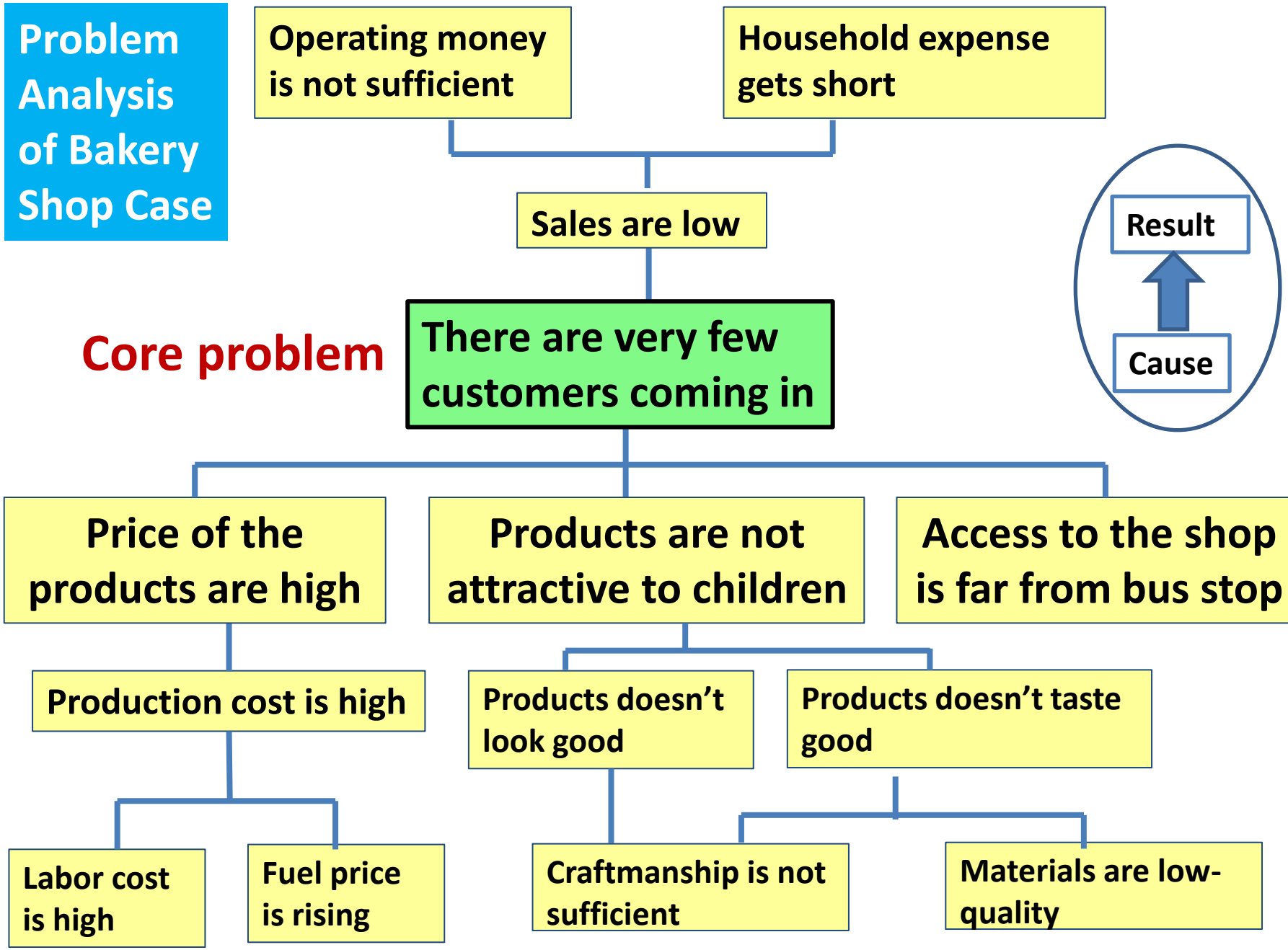
Let’s try making a problem tree!

Few customers come in

Products are not attractive

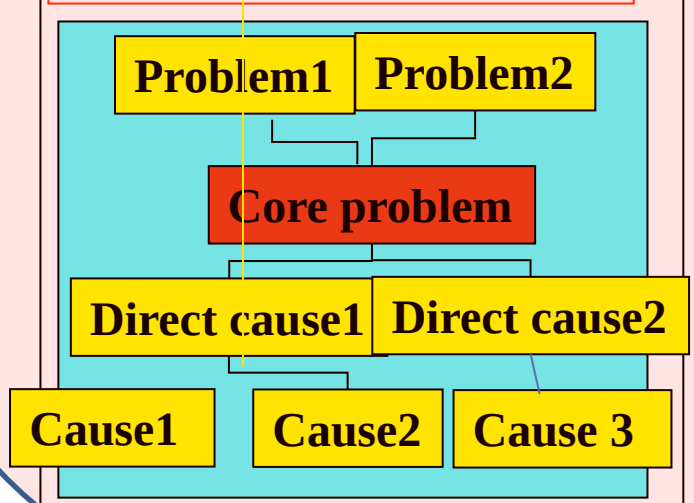
Price is high

Shop locates far from bus stop

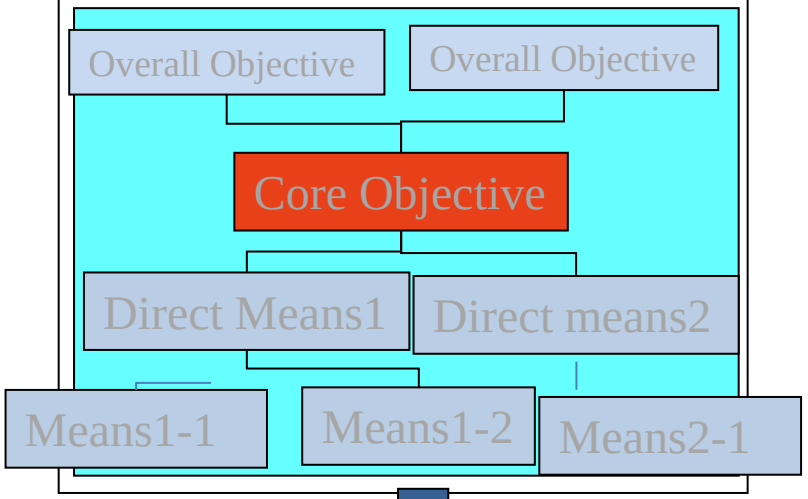

Problem Analysis of Bakery Shop Case
Operating money is not sufficient
Household expense gets short
Sales are low
Result
Cause
Core problem
There are very few customers coming in
Price of the products are high
Products are not attractive to children
Access to the shop is far from bus stop
Production cost is high
Products doesn't look good
Products doesn't taste good
Labor cost is high
Fuel price is rising
Craftmanship is not sufficient
Materials are low-quality

Problem Tree making

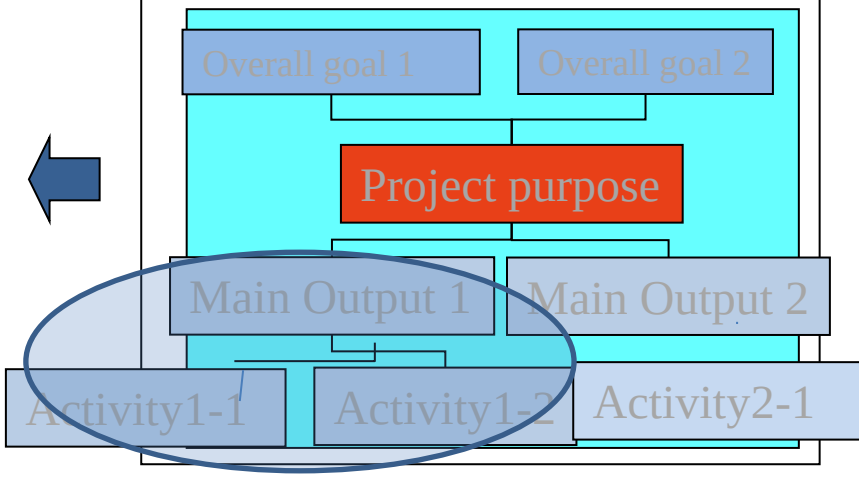
1. Problem Analysis



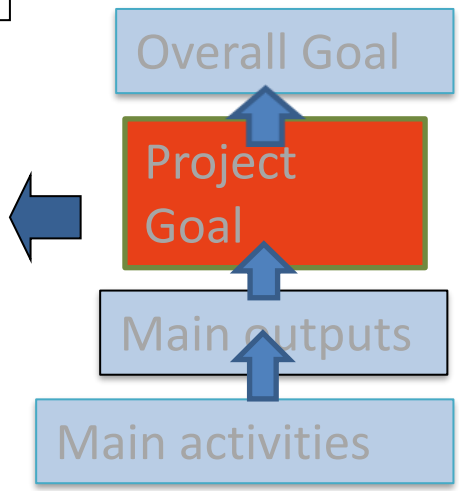
2. Objective Analysis



3.Project Identification



4.Logic Modeling



5.Creation of PDM

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Case study of Timur village

Timur is a mountain village in a country of Central Asia, with about 500 people, most of whom are micro-farmers. There is very little employment other than farming. Farmers plant barley and vegetables on small lands less than 1 acre/a head. They sell their products to earn cash and consume some by themselves. Access to agricultural machinery is poor due to a lack of service providers. The village is in a semi-arid area, but snow-melting water flows through the mountains nearby. There are few irrigation facilities. Only 10 % of farmers are members of Dehkan, but the members are increasing nowadays.

Farmers' income is low

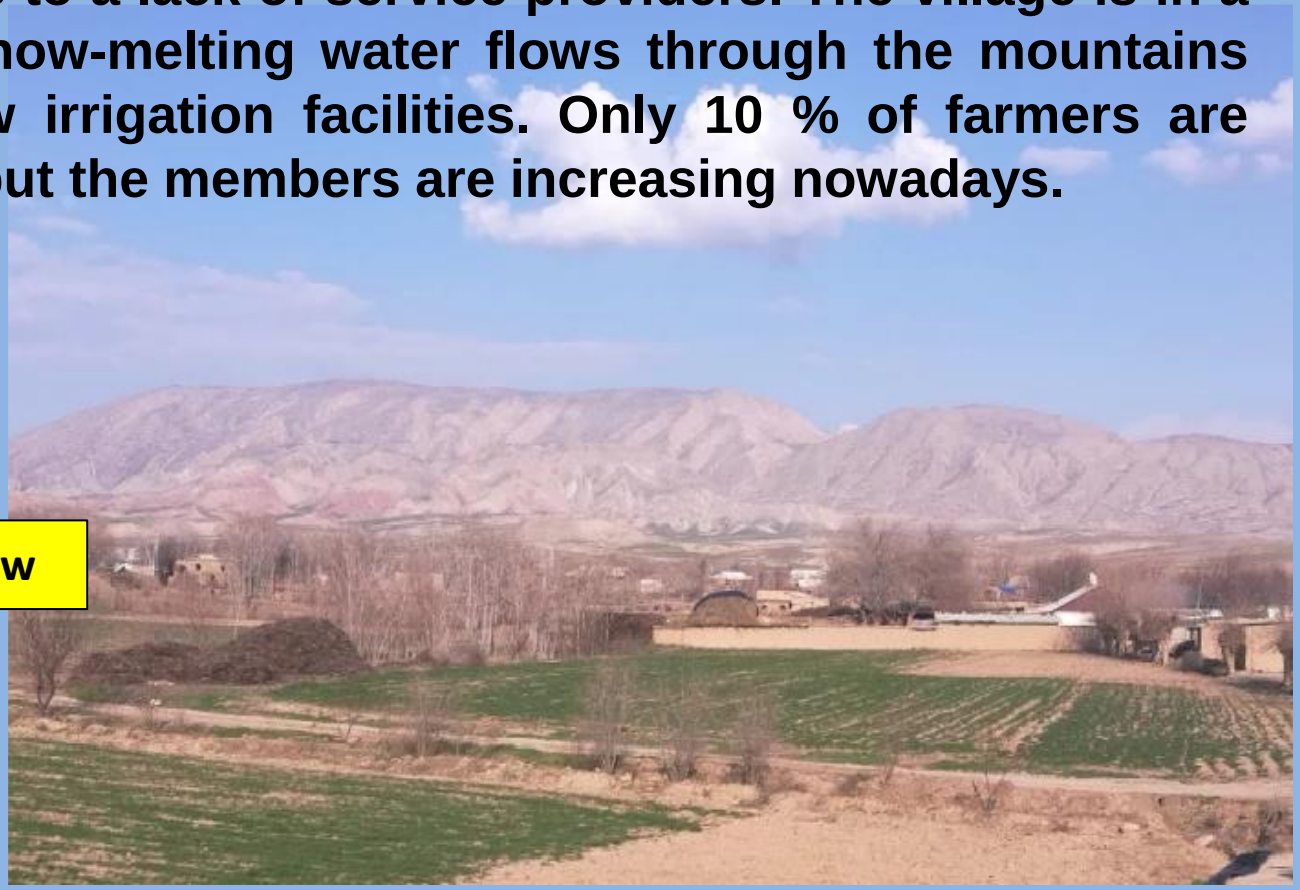
Access to agricultural machinery is poor

Land is small

Yield is low

Farmers are not organized

Irrigation is not sufficient



Case study of Timur village

The cultivation method is traditional. Mostly they sow seeds on land, without preparing seedlings. As a result of these situations, yields are 50% lower than the national average, and farmers' income stays low.

The agricultural Institute in Rudaki City, located 20 km from this village, has new agricultural technology. Its extension staff sometimes come to the village to provide guidance.

Brokers from Rudaki City come to buy agricultural products at low prices as they like. Farmers don't know the price at which their products are sold in the city. The brokers also sell necessary agricultural fertilizers and materials and sometimes lend money to the farmers at a high-interest rate

Cultivation method is outdated

Farmers don't know their product price

Price of the products is low

Case study of Timur village

There is an elementary school in the village, but school enrollment is low because bus fare to the secondary school outside the village is a heavy burden to parents. There is a health post in the village without a doctor. When villagers fall into serious sickness, they must travel 10 km to a clinic in the nearest town, or a hospital in Rudaki City.

Young men begin their work carrier in Rudaki City, then, most of them have to immigrate to Russia for construction labor to complement household income. Remittances from migrant laborers are usually used to renovate houses and update the furniture in their households. Only a few people start to open shops. Women in the village are generally hard-working, engaging in not only childcare and housework but also in farming work.

Remittance from immigrant workers is not utilized for setup

Let's begin making problem tree!

School enrollment is low

Villagers endure in health risks

Parents can't pay school bus fare

Villagers can't employ a doctor in the health post

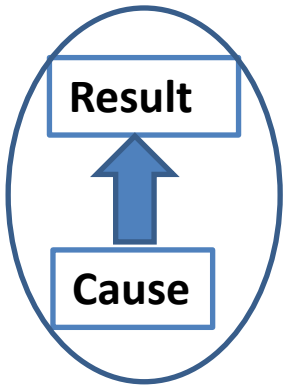
Farmers' income is low

Yield is low

Price of the products is low

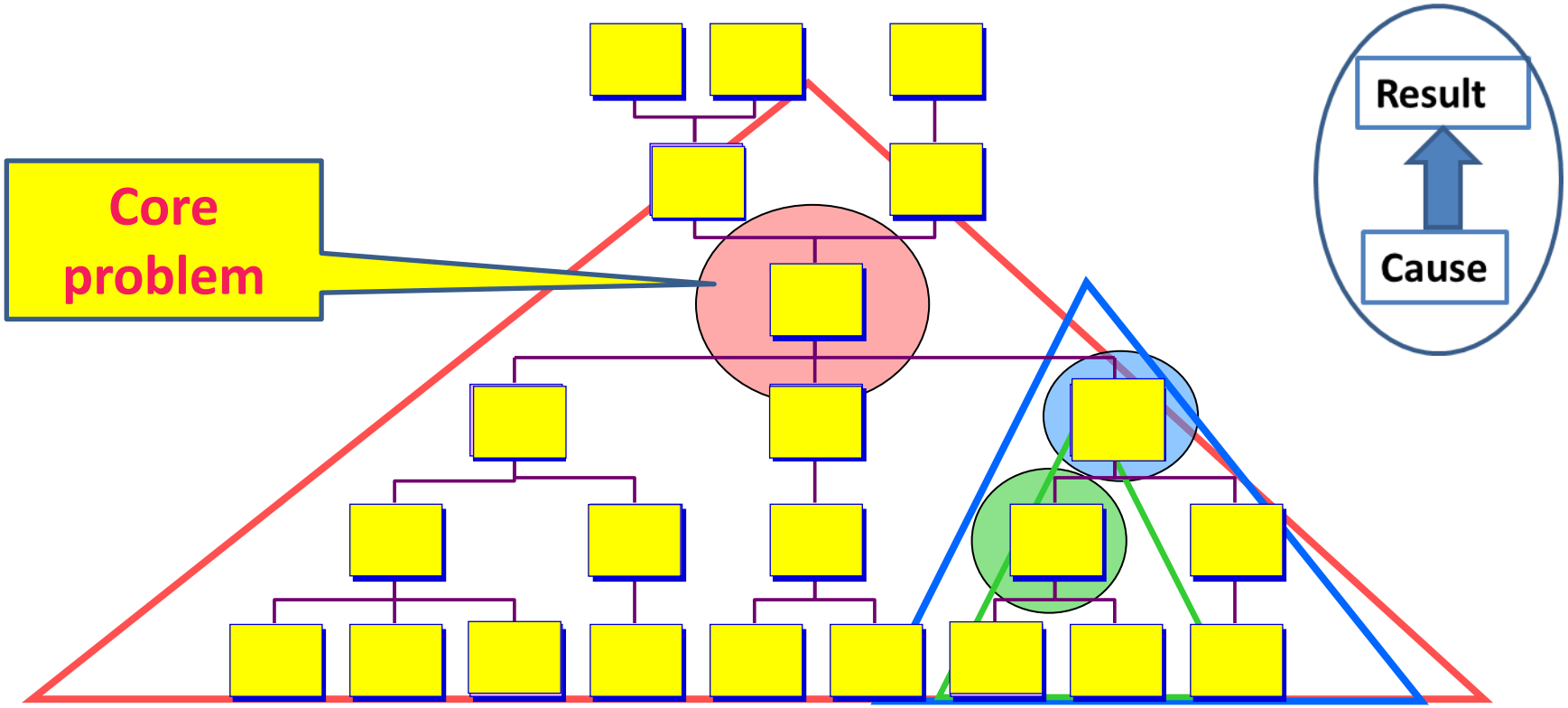
Non-agricultural income is low

Problem cards were put in accordance with the "cause-result" correlations



What is “Core Problem”?

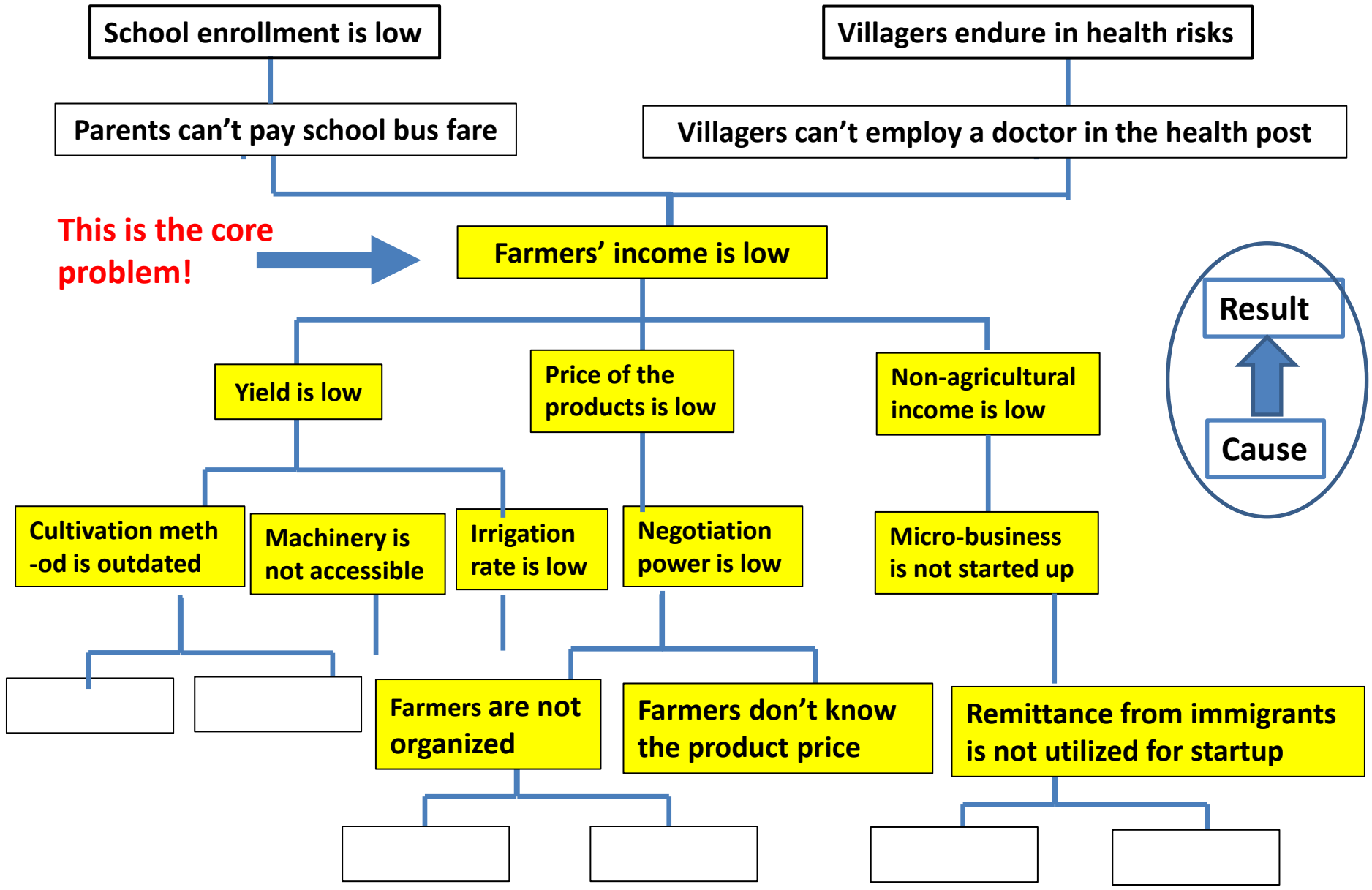
Core problem results from many causes connected underneath. You can also call it a “bottleneck”. If you find out the core problem, create further problem cards below “core problem”.



Let’s try to make your problem tree of Timur village!

Case study of Timur village

An example of problem tree making



The end of Day 1

Making Project Plans using PCM methods

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Day 2

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Schedule of this workshop

Day 2

09:00 – 09:15 Review of the yesterday's outputs

09:15 – 09:45 Solution Analysis¥

Project identification and selection of projects (Group work)

09:10 – 09:30 Logic Modeling

Relation between Solution analysis and PDM

09:30 – 10:00 What are Pre-condition, External Conditions and Inputs? (Group work)

10:10 – 10:50 How to set indicators (Group work)

10:50 – 11:00 Break Time

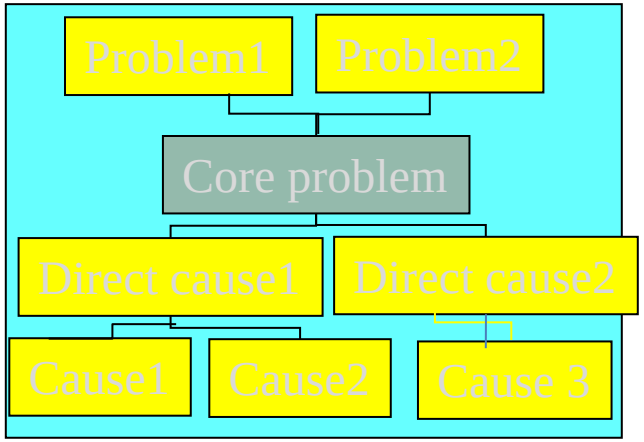
11:00 – 11:20 Completing PDM (Group work)

11:20 – 11:50 Making Project Papers (Individual work)

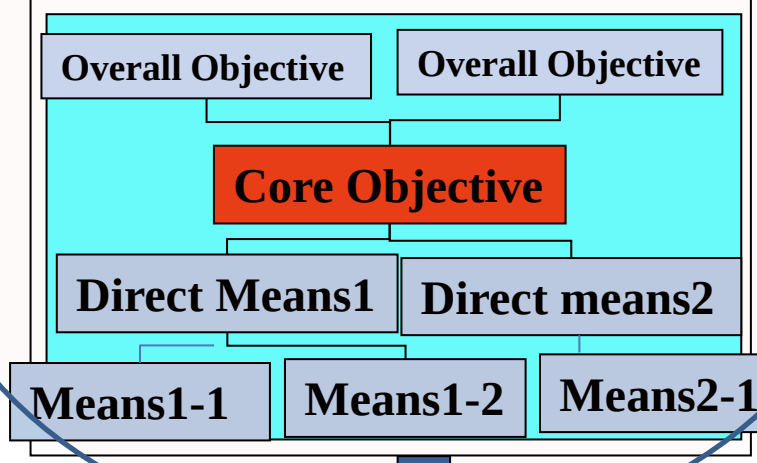
11:50 – 12:00 Review of the session

Solution Analysis

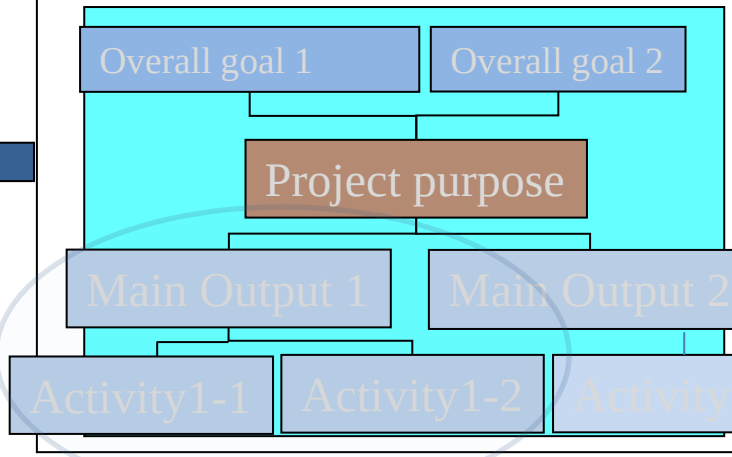
1. Problem Tree Making



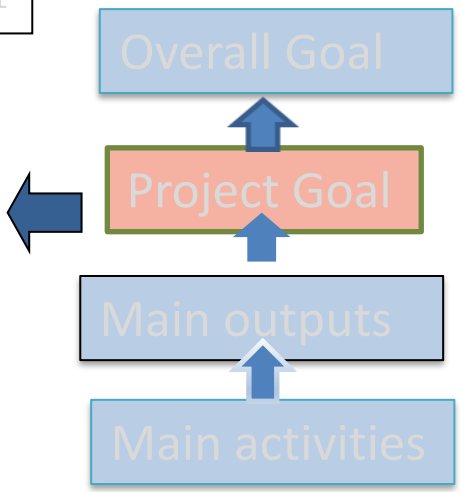
2. Solution Analysis



3.Project Identification



4.Logic Modeling



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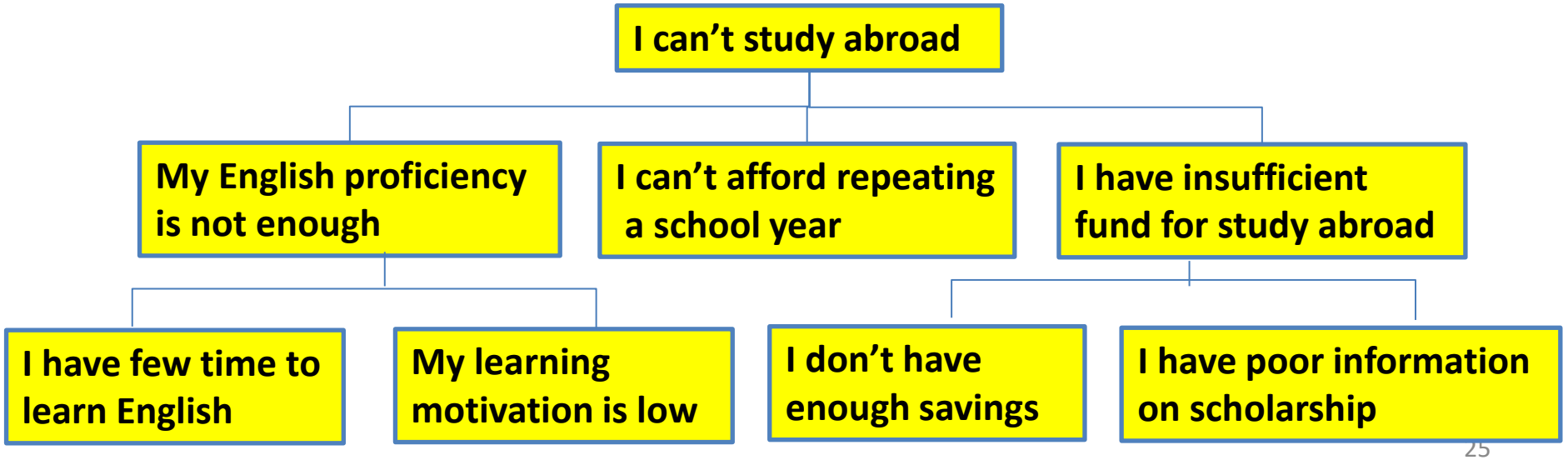
What is Solution Analysis?

To turn problems into solutions by reversing the cards of negative expressions into positive expressions.

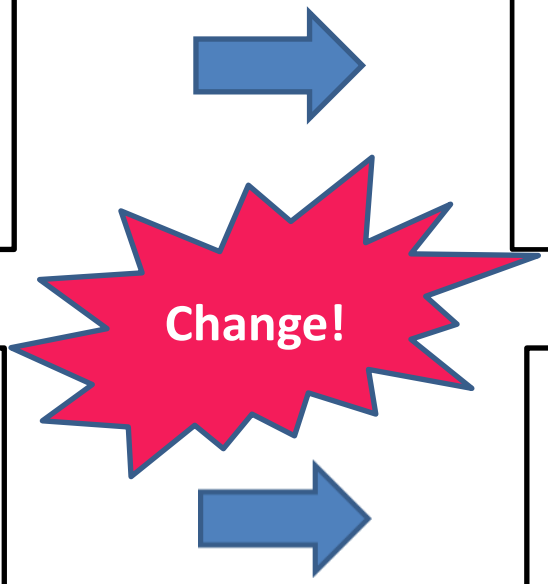
Exercise: Let's turn negative expression into positive expression in the following problem tree in the case " I can't study abroad".



Problem cards ⇒ Solution cards

Farmer's income is low

Cultivation method is outdated



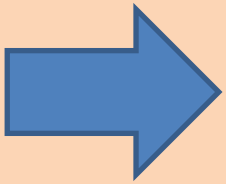
Farmer's income increases

Cultivation method is reformed

How to make Solution Analysis

① Turn the core problem into a solution by positive expression.
② Express an ideal situation in a present tense that the problem is solved.

No good 
Micro-business was started up

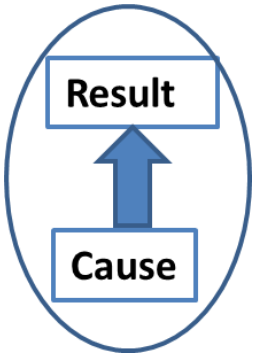


Good! 
Micro-business increases

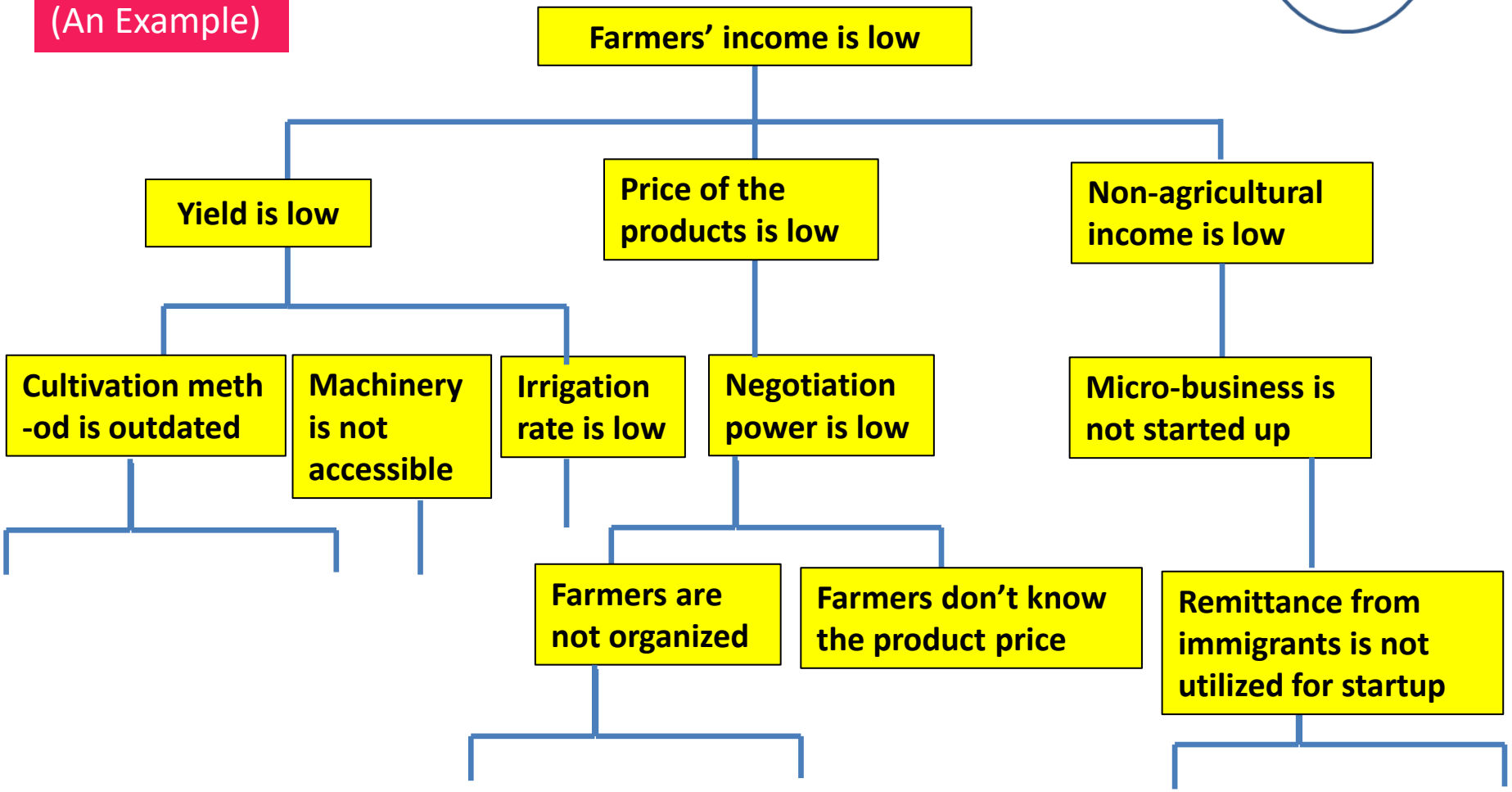
③ Go down to problem cards under the core problem.
④ Confirm solution-means correlation is correct.
⑤ Add new cards, if necessary, to clarify the means to achieve the solution.

Case study of Timur village

Let's turn negative expression into positive expression in the following problem tree!

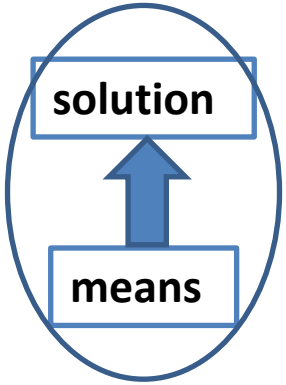


Problem Tree
(An Example)



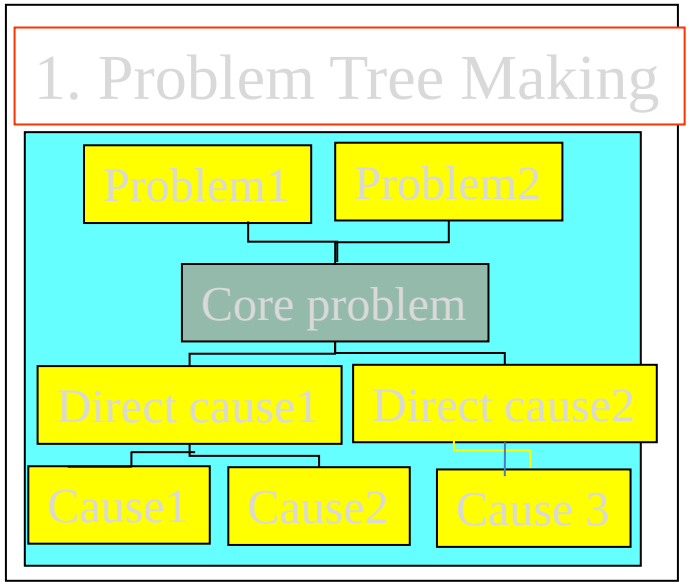
Case study of Timur village

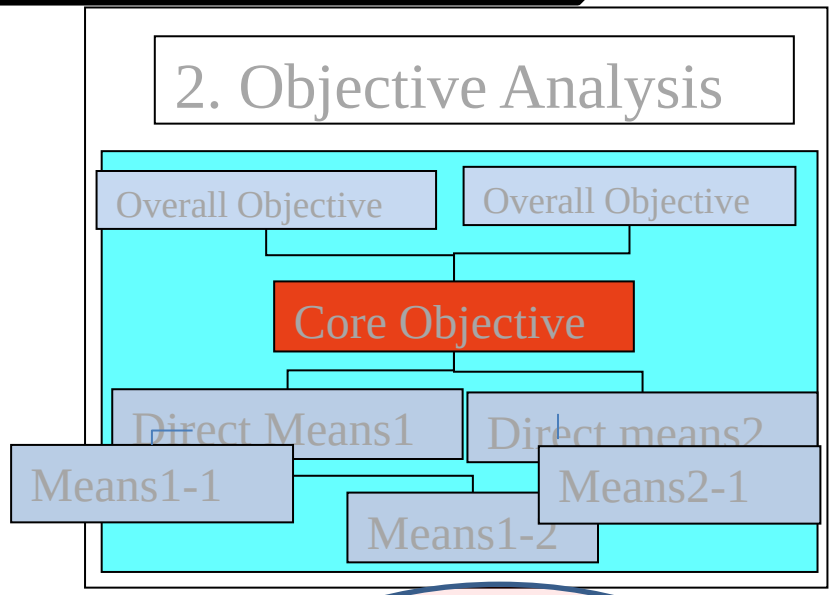
Solution Tree
(An example)

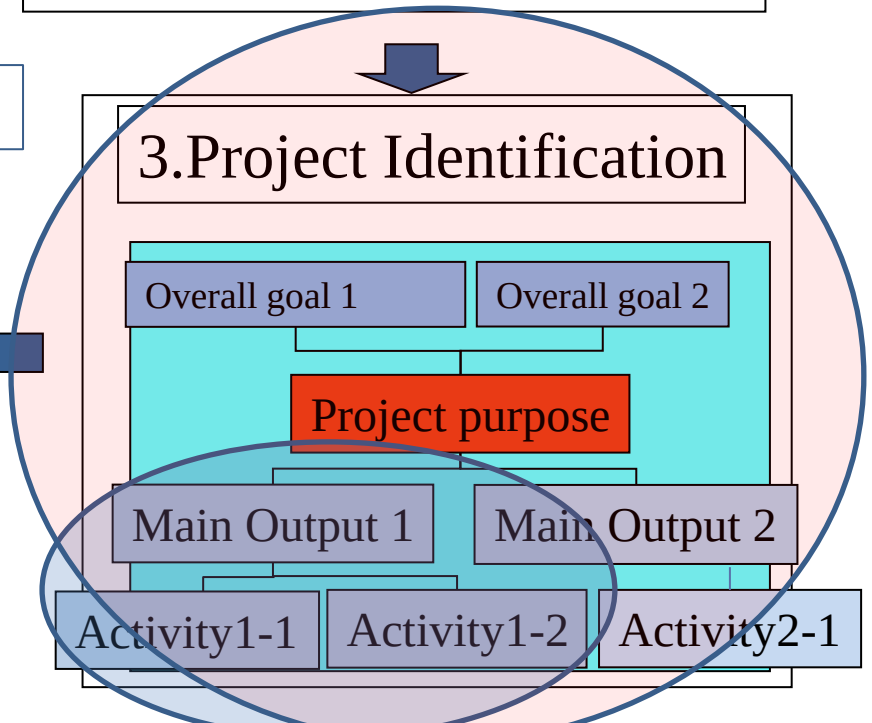


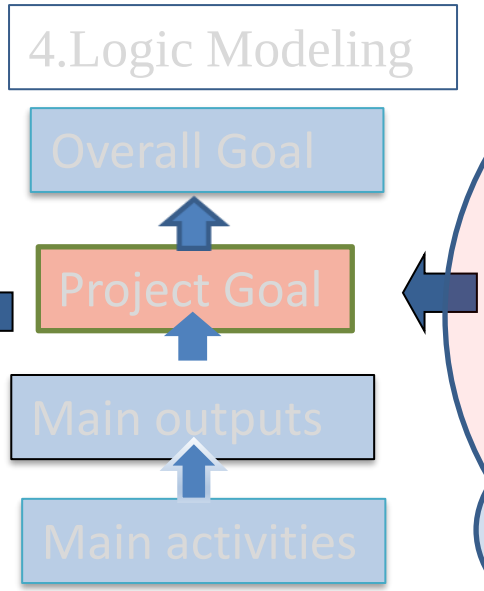
- Farmers' income increase
  - Yield increase
    - Cultivation meth -od is reformed
    - Machinery is accessible
    - Irrigation is developed
  - Appropriate prices of the products are maintained
    - Negotiation power improves
      - Farmers are organized
      - Farmers know the product price
  - Non-agricultural income increase
    - Micro-business increases
      - Remittance from immigrant is utilized for startup

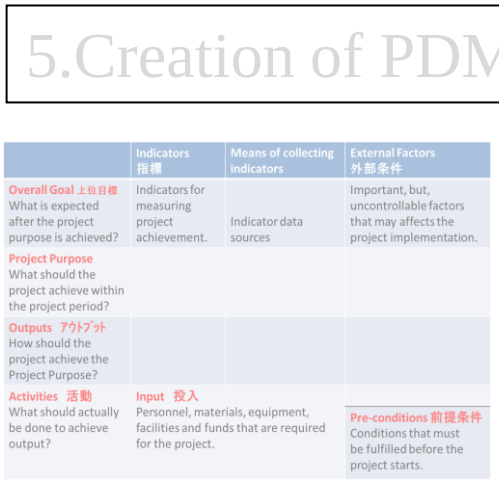
Project Identification











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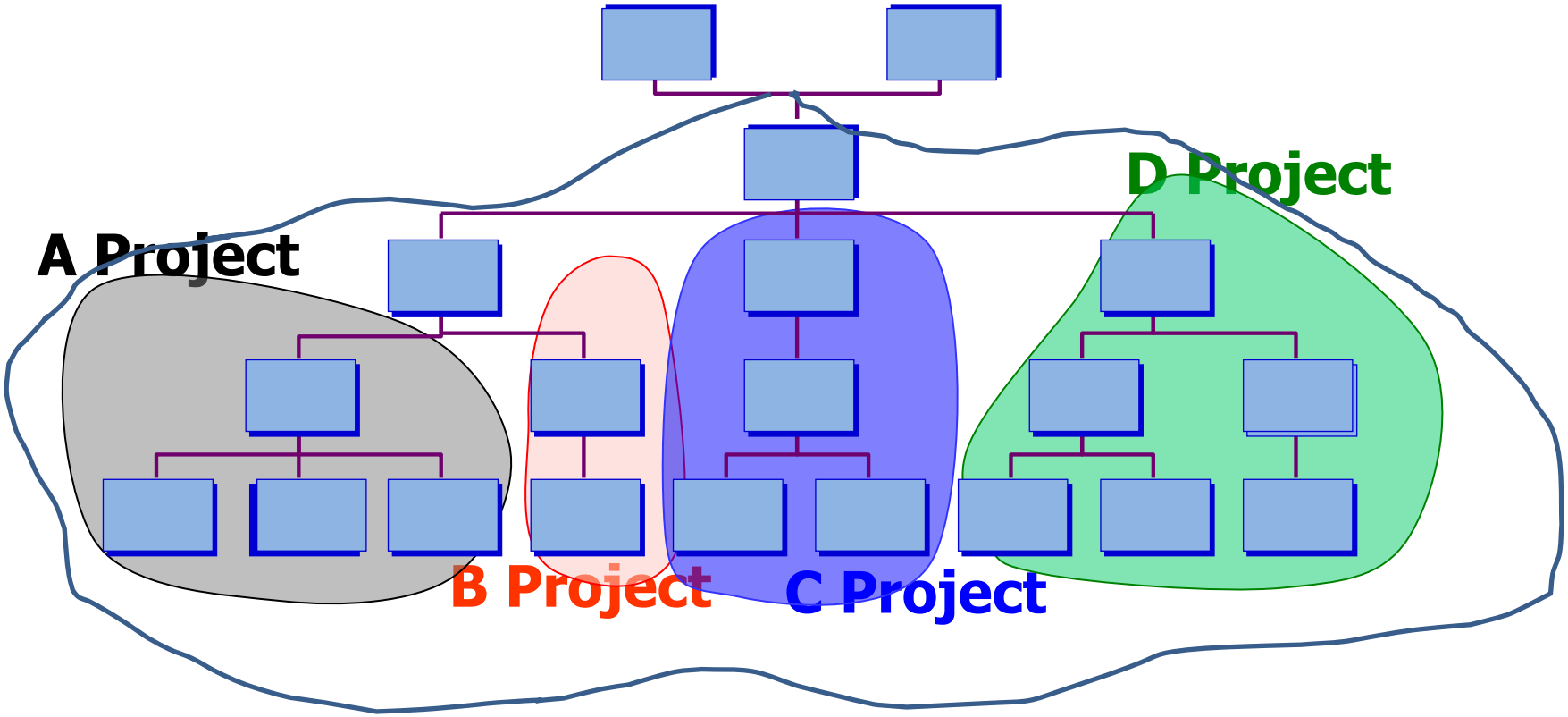
What is Project Identification?

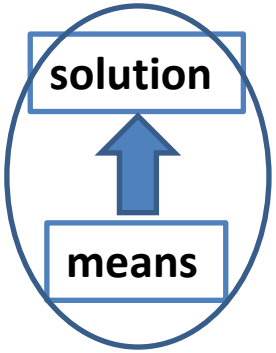
Identify projects by surrounding a cluster of branches approaching the same solution with a frame.



How to identify projects

Find out clusters in which all means are approaching the same solution.

Exercise: Let's identify 4 projects in the following solution tree by surrounding clusters with frames, then name them!

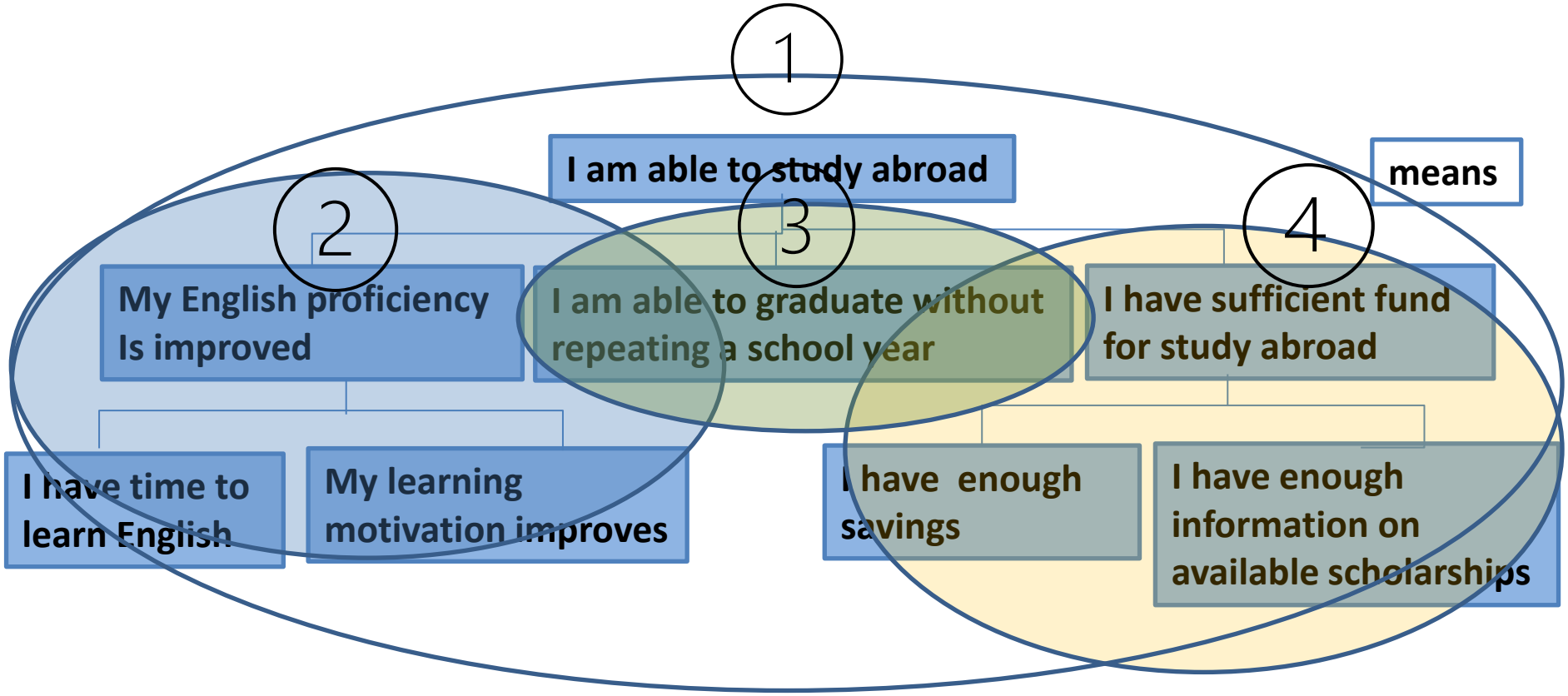


Why can't I study abroad? A case of a student

- I am able to study abroad
  - My English proficiency Is improved
    - I have time to learn English
    - My learning motivation improves
  - I am able to graduate without repeating a school year
  - I have sufficient fund for study abroad
    - I have enough savings
    - I have enough information on available scholarships

We can make at least 4 projects in this solution tree!

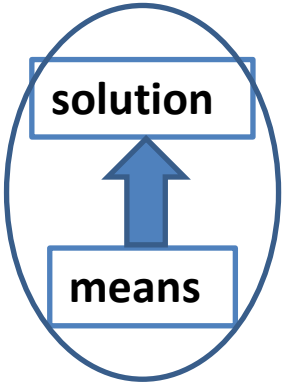
Why can't I study abroad? A case of a student



Identify projects in your solution tree

Case study of Timur village

Project Identification
(An example)



①Project for Farmers income improvement

Farmers' income increase

②Project for increasing the yield of agricultural products

③Project for maintaining appropriate prices

④Project for increasing non-agricultural income

Yield increase

Appropriate prices of the products are maintained

Non-agricultural income increase

Cultivation meth od is reformed

Machinery is accessible

Irrigation is developed

Negotiation power improves

Micro-business increases

Farmers develop direct sales routes

Farmers know the product price

Remittance from immigrant is utilized for startup

Solution Tree
(An example)

Selection of projects

Prioritize the projects by important criteria such as; Cost, Transferring technology, Effect on the core problem, Policy priority, People's needs, Sustainability, Urgency, Ability of implementing agency, Environment impact, etc.
Make a comparison list like below, and make selection.

＊4-grade score evaluation

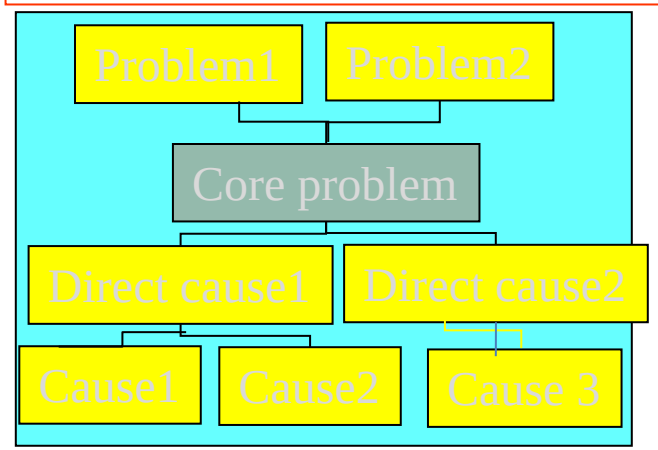
Project	Effect on the core problem	Cost	Sustain-ability	Urgency	total
○○ Project	High 4	High 1	High 4	High 3	12
○△ Project	Middle 2	Middle 2	High 3	Low 1	8
△△Project	Low 1	Low 4	Low 2	High 4	11

Selection criteria

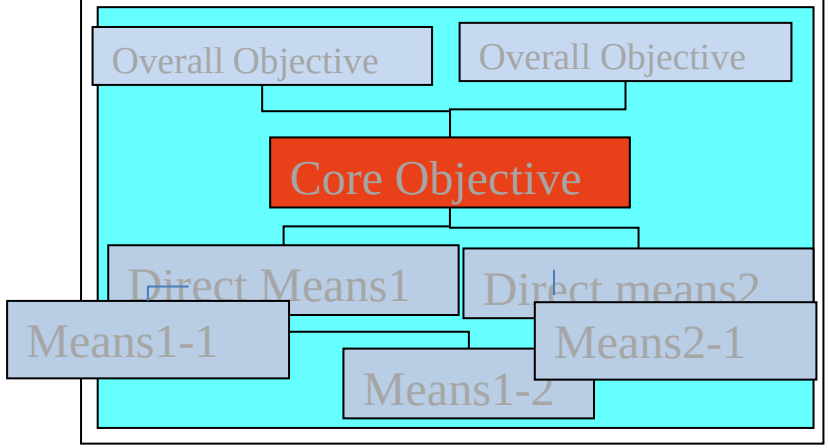
	Criteria	Point
1	Cost	How much is the budget available to implement the projects? Select a project within the available budget.
2	Transferring technology	Is the technology to be transferred available in the implementing agency? If not, it must be outsourced.
3	Effect on the core problem	Does the purpose of the project contribute more to the core problem than other projects?
4	Political priority	Is the project purpose matching with the political priority of the government and implementing agency?
5	People's needs	Does the project directly meet targeting people's needs? Do the people support the project implementation?
6	Sustainability	Will the project outcome continue for a long time? Does the recipient bear the recurrent cost after the project?
7	Urgency	Is the project required to implement urgently, or can it be implemented anytime?
8	implementing Agency' ability	Is the ability of implementing agency enough? If not, is there any options?
9	Environment Impact	Does the project have a grave impact on the environment? If it cannot be reduced to an acceptable level, give up the project.

Logic Modeling

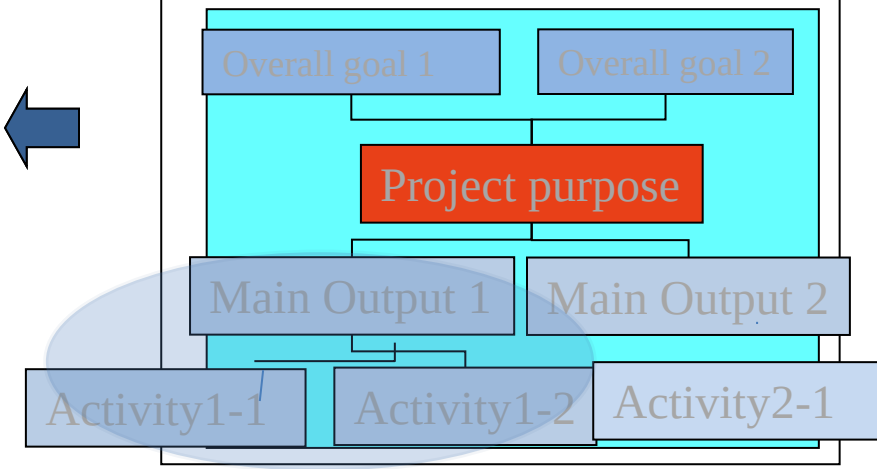
1. Problem Tree Making



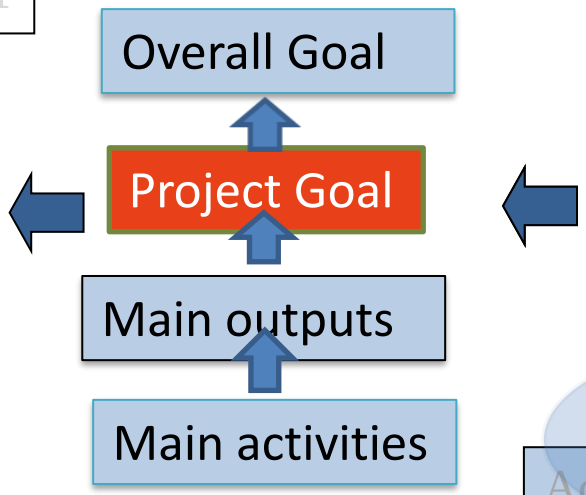
2. Objective Analysis



3.Project Identification



4.Logic Modeling

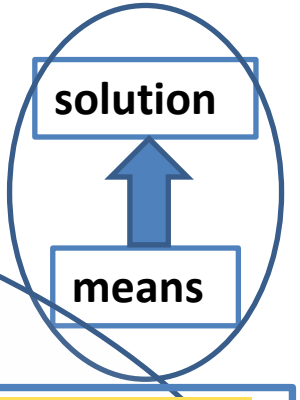


5.Creation of PDM

	Indicators 指標	Means of collecting indicators	External Factors 外部条件
Overall Goal 上位目標 What is expected after the project purpose is achieved?	Indicators for measuring project achievement.	Indicator data sources	Important, but, uncontrollable factors that may affects the project implementation.
Project Purpose What should the project achieve within the project period?			
Outputs アウトプット How should the project achieve the Project Purpose?			
Activities 活動 What should actually be done to achieve output?	Input 投入 Personnel, materials, equipment, facilities and funds that are required for the project.		Pre-conditions 前提条件 Conditions that must be fulfilled before the project starts.

Case study of Timur village

Solution Tree
(An example)



①Project for Farmers income improvement

Farmers' income increase

②Project for increasing the yield of agricultural products

③Project for maintaining appropriate prices

④Project for increasing non-agricultural income

Yield increase

Cultivation meth -od is reformed

Machinery is accessible

Appropriate prices of the products are maintained

Irrigation is developed

Negotiation power improves

Farmers develop direct sales routes

Farmers know the product price

Non-agricultural income increase

Micro-business increases

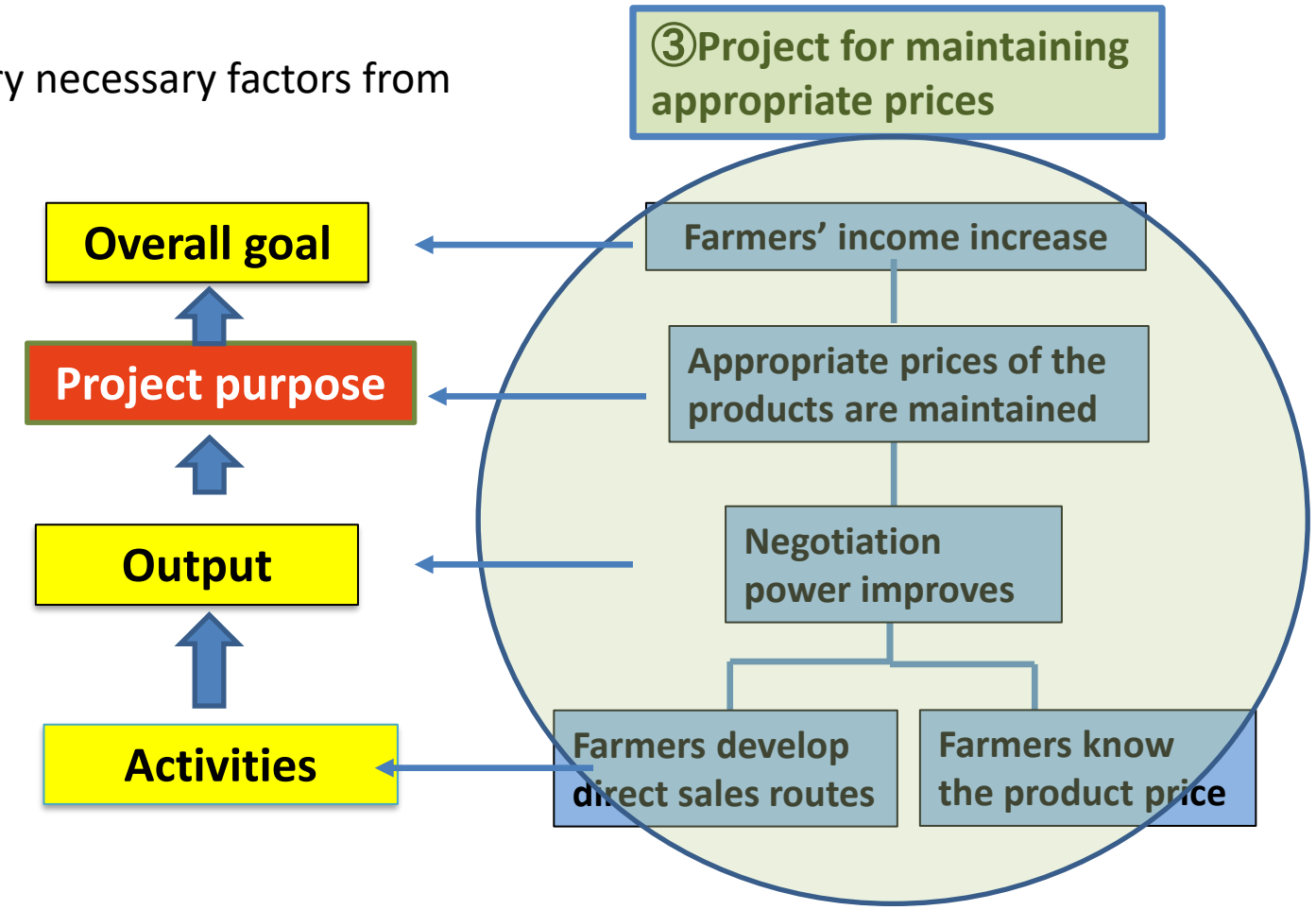
Remittance from immigrant is utilized for startup

Take out this project to the next page

What is Logic Model?

Logic Model shows "means-solution" correlation to attain the project goal logically in a simple chart. It is also called "theory of change"

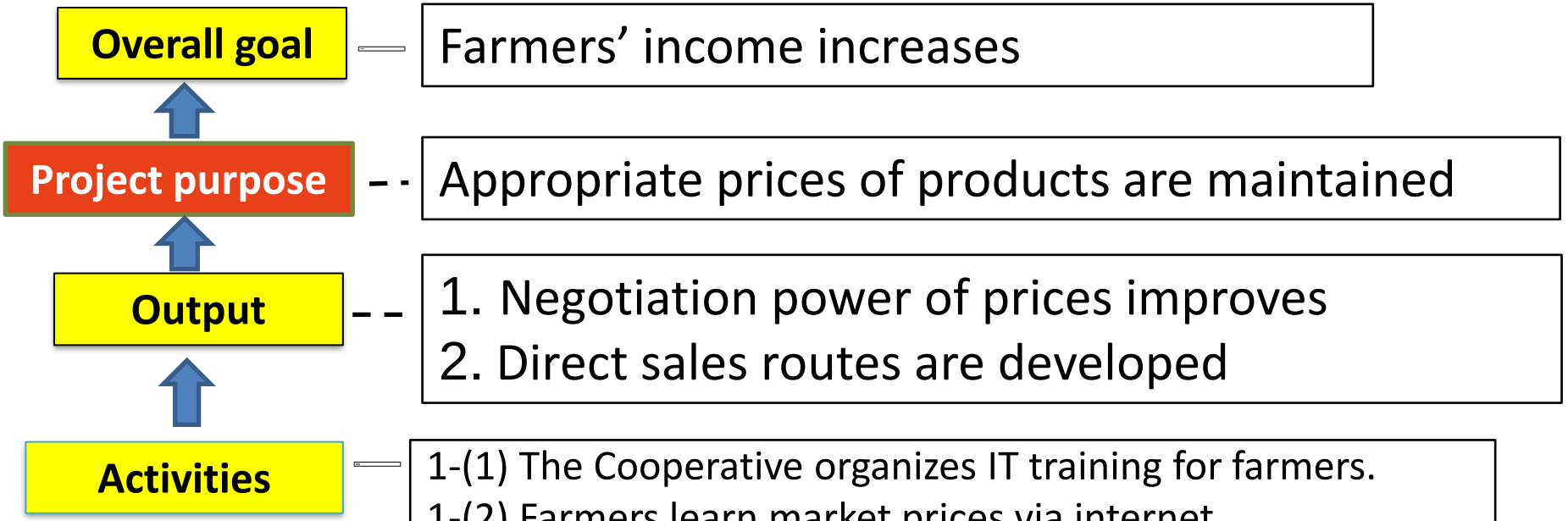
You can bring every necessary factors from Solution tree.



To complete logic model, see next page

Case study of Timur village

③Project for maintaining appropriate prices (logic model)

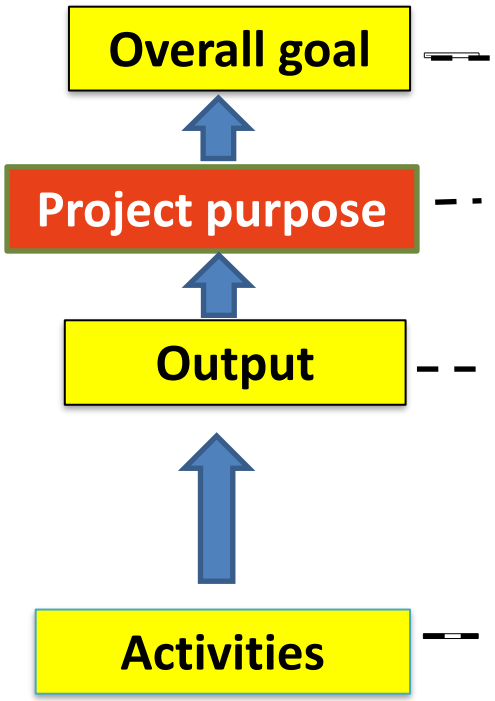


You must detail plan of activities by group discussion.

Case study of Timur village

(An example)

②Project for increasing the yield of agricultural products (Logic Model)



Farmers' income increases

Yield of agricultural products increases

1. Cultivation methods are reformed
2. Machinery is accessible for macro-farmers
3. Micro-scale Irrigation is developed

1-(1) Agriculture Institute surveys cultivation reforms.

1-(2) The institute hold training in cultivation method

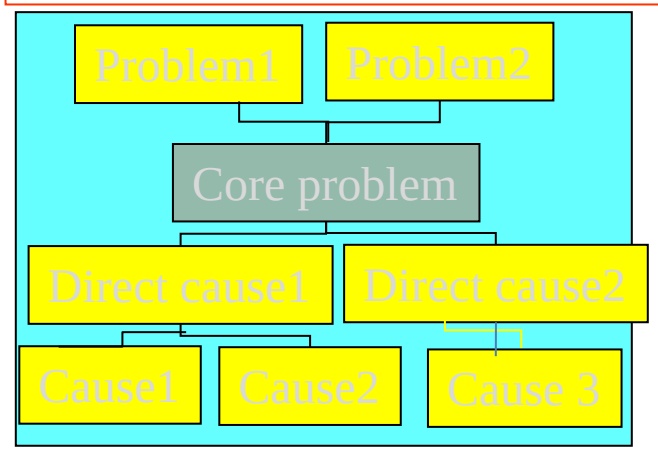
2-(1) Agriculture Cooperative is organized

2-(2) The coop purchases and rents farm machine

3-(1) Community begins fundraising activities

Creation of PDM

1. Problem Tree Making



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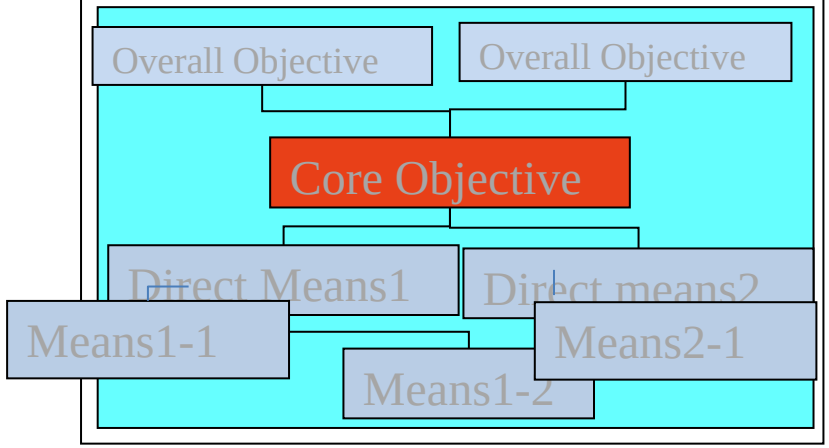

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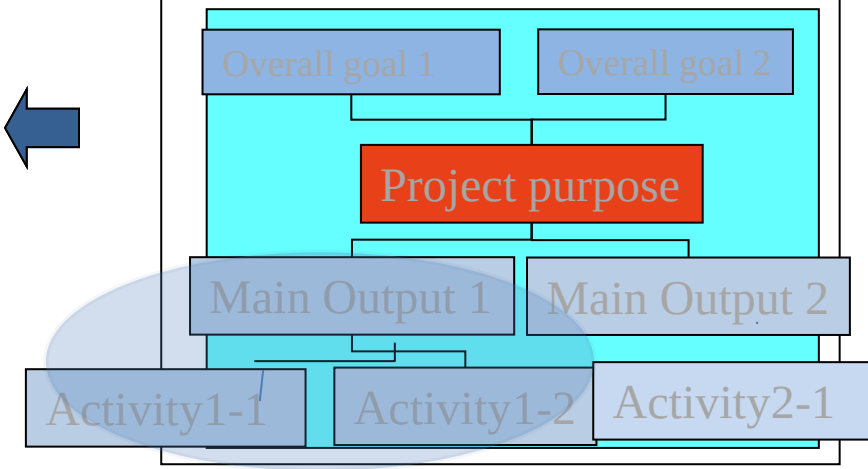
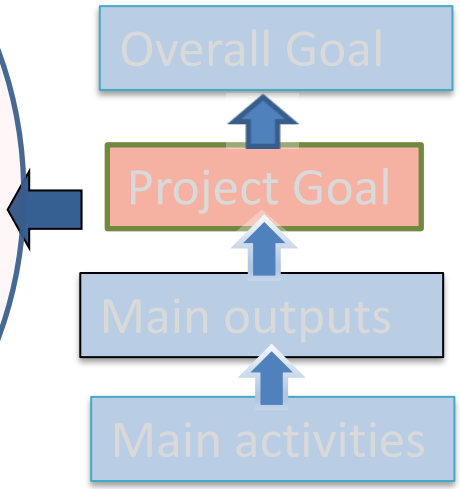


4.Logic Modeling



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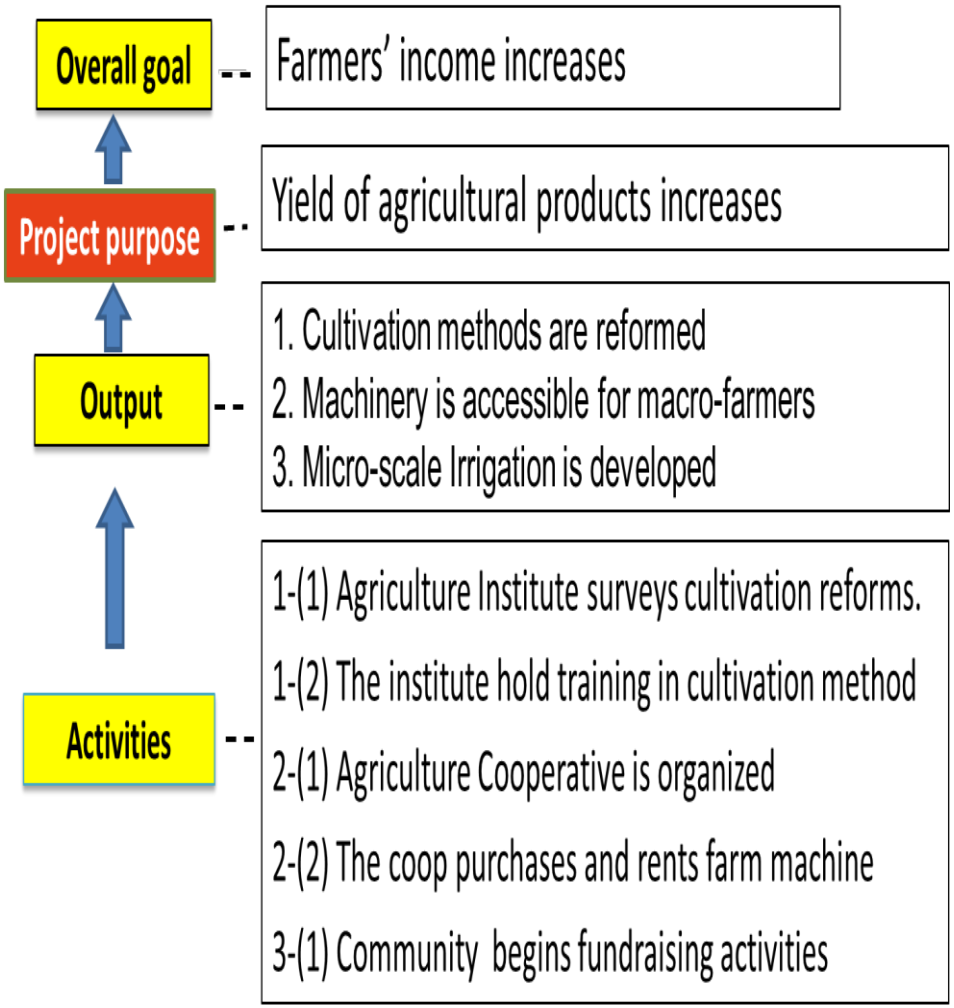
Activities 活動 What should actually be done to achieve output?	**Input** 投入 Personnel, materials, equipment, facilities and funds that are required for the project.		**Pre-conditions** 前提条件 Conditions that must be fulfilled before the project starts.

What is PDM (Project Design Matrix)

- A summary table of the project in a 4x4 matrix
- The most basic planning document for a project
- We create PDM from Logic Model or Solution Tree.

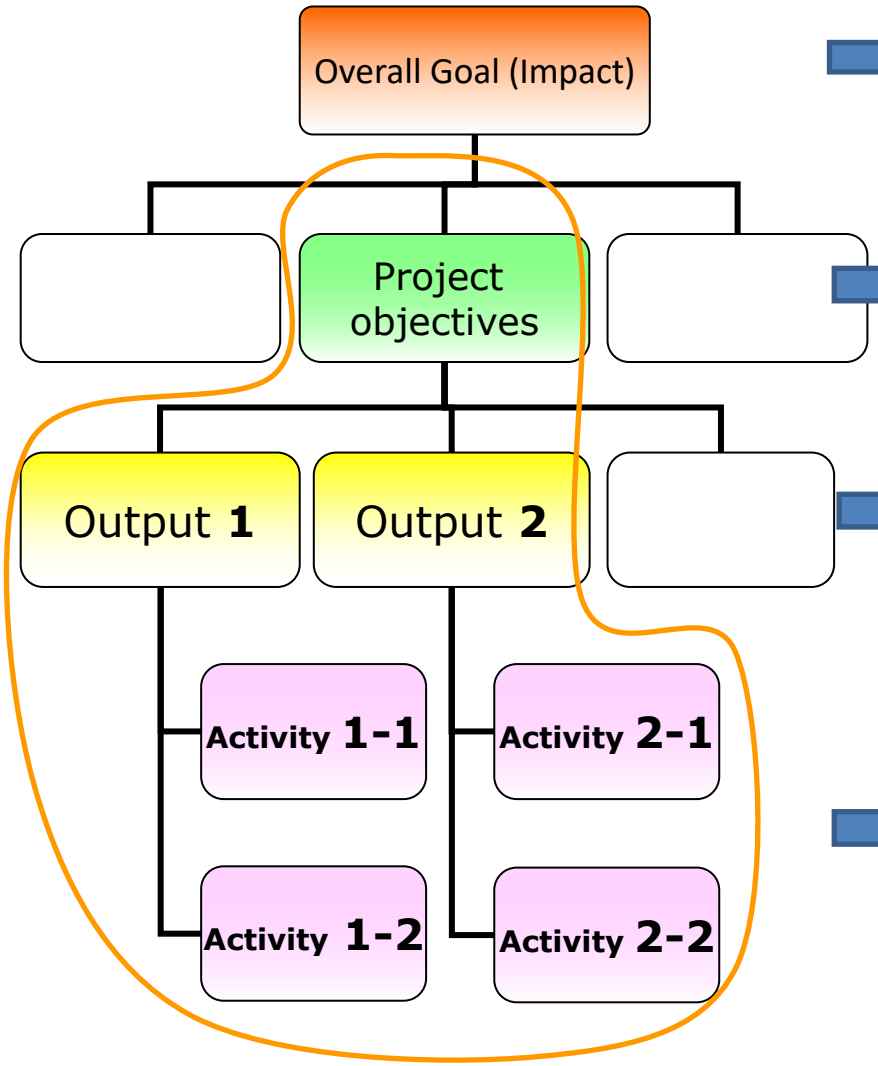
Project summary	Indicators	Source of data	External conditions
Overall goal			
Project purpose			
Outputs			
Activities	Inputs		
			Preconditions

Create "Project Summary" from "Logic Model"



Project summary	Indicators	Source of data	External conditions
Overall Goal			
Project objective			
Outputs			
Activities	**Input**		
			Pre-condition

Create “Project Summary” from “Solution Tree”



Project summary	Indicators	Source of data	External conditions
Overall Goal (Impact)			
Project objective			
Output			
Activities	Inputs		
			Preconditions

What is "Inputs" in PDM?

- Inputs is necessary infrastructures to begin the project.
- They usually includes man-power, equipment, facilities, budget to operate the project.
- In case the project is jointly implemented by more than 2 implementers, split them into both sides.

What is "Preconditions" in PDM ?

- Precondition are requirements before project starts.
- It mentions organizational, financial, juridical matters without which project can't starts.
- For instance, "Agricultural Cooperative is already working" can be one of the precondition, because it takes time to organize community organization from outside.

What is “External Conditions” in PDM ?

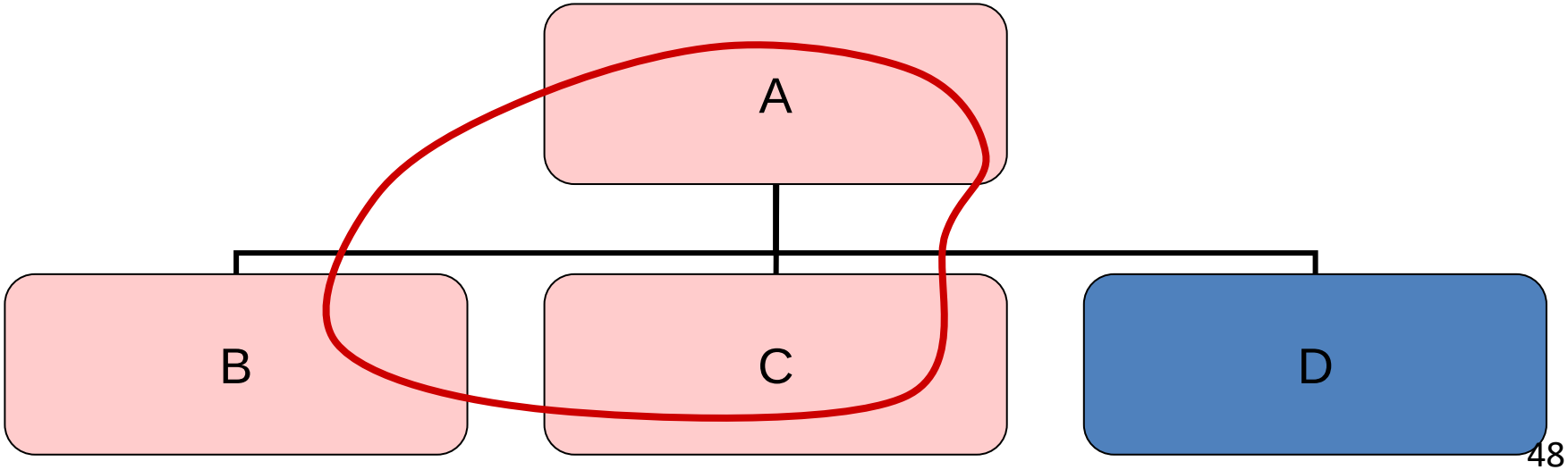
- External Conditions are necessary for the success of the project but cannot be controlled by the project.
- It is similar to “prior risk management”. Discuss what kinds of external risk are expected during the project period.

＜Examples of external conditions>

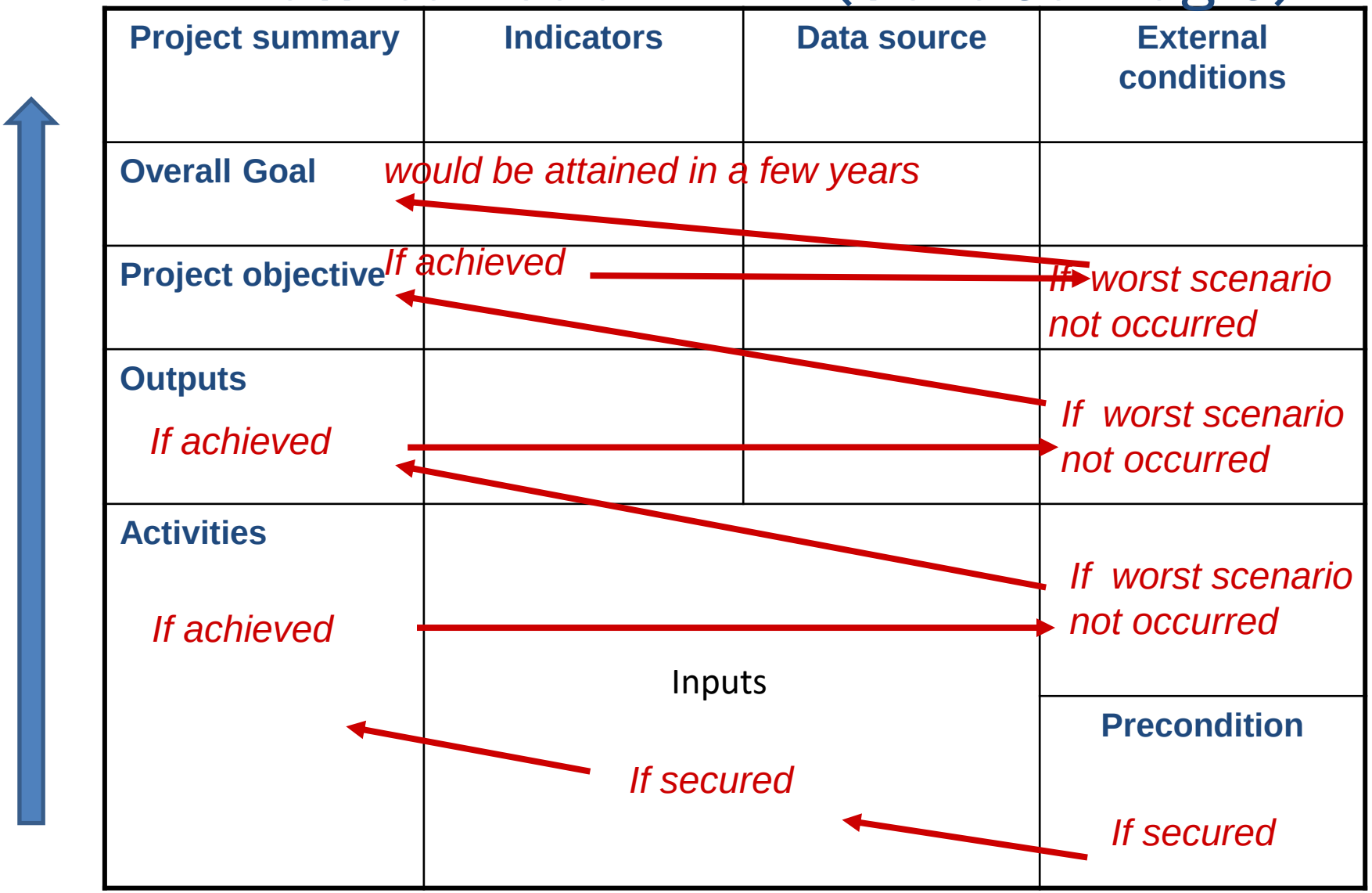
- Weather (typhoons, earthquakes, droughts, floods, wildfires, etc.)
- Political and economic instability (hyper inflation, sharp change of interest rate/exchange rate, etc.)
- Policy changes, change of laws/systems, government budget shortage, political instability
- Worsening relationship with partner authorities

"External conditions" taken from the solution tree

In this solution tree, B, C, D are required in order to achieve A.
When the project only takes only B and C approaches, D might be an external condition.



How to read PDM (vertical logic)



Relevant factors for creating Indicators

- Levels that meet the needs of the target group
- National and prefectural averages
- Actual performance values of similar projects that have been successful
- Target values used by the countries with similar conditions
- Standard values set by experts

Elements of “indicators”

①What(data to measure)

②Who(subject)

③Where(region, place)

④How much will be reached (quantitative change target)

⑤By when(deadline for achievement)

⑥Compared to what (Baseline)

<Example>

Goal：”Increase income”

Indicator：

①The annual income

②of 2,700 farmers

③in ○○ district

④increase by more than 50%

⑤by2011

⑥compared to 2008

Case study of Timur village PDM(Example)

Project title　Target group/area　Period　Implementing Agency

	Indicators	Source of Data	External Conditions
Overall Goal Farmers' income increases	Farmers' income increases by 20 %	Statistics of income by region	
Project Purpose Appropriate prices of products are maintained	Wholesale price of the product increase by 30%	1. Sales records by the cooperative	Agricultural production do not decrease.
Outputs 1. Negotiation power of prices improves 2. Direct sales routes are developed	1. Number of IT ex-participants of IT training amount to 200 farmers 2. Direct sales increase by 50%	1.Data of training in the Cooperative 2. Marketing research	Consumption spending doesn't shrink. Transportation (fuel) costs don't hike.
1-(1) Cooperative organizes IT training for farmers. 1-(2) Farmers learn market prices via internet. 2-(1) Cooperative executes market research and finds the best consumer market. 2-(2) Sales publicity is targeted to the best market. 2-(3) Direct sale routes to the best market are developed.	Input 1. Experts（IT, Marketing） 2. Laptops, Internet access 3. Training facilities 4. Recurrent cost		Outflow of young people from village doesn't increase Pre-conditions ・Cooperative is working in the village ・New subsidiary fund is introduced by the government

Let’s create your own PDM !

When you finish creating PDM,
let’s create your own project paper!

Project document (example)

Project title is composed of project purpose + main outputs

Project for Maintaining Appropriate Prices for Agricultural Products by Strengthening Information Awareness and Marketing

Implementing Agency

Name of Ministry

Background

- Present Situation

  Please describe the gaps between Ideals and reality/policy and implementation

- Main Problem

  Please choose a main problem from the gaps describe above

- Main Countermeasure

  Please describe the countermeasure to cope with the problem described above. The countermeasure is the general idea of the project below.

Main Activities

- Please list the activities to be implemented to attain the outputs above. Describe concrete activities corresponding to each output along the axis of time.

(1)-①
(1)-②
(1)-③

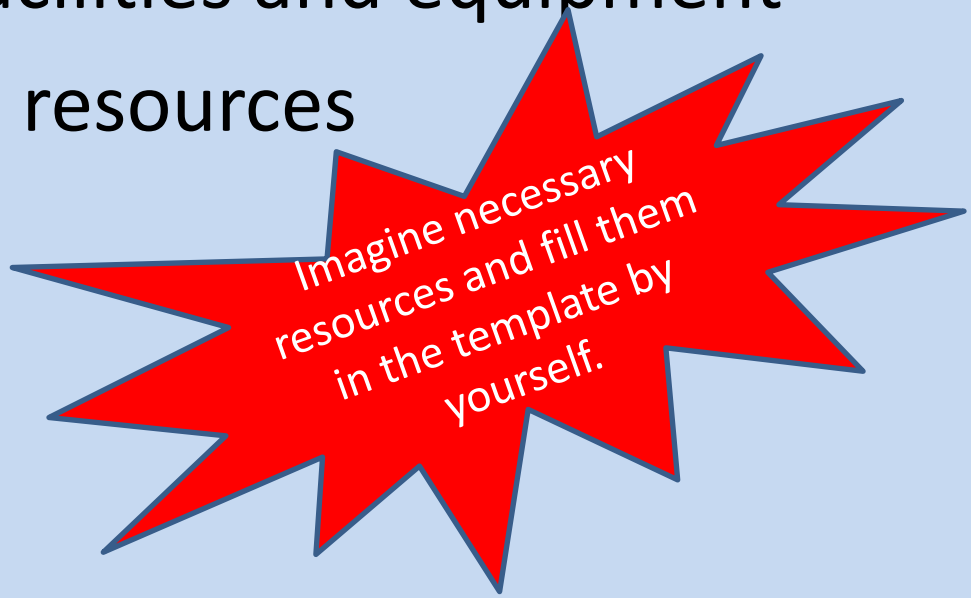
(2)-①
(2)-②

(3)-①

.....

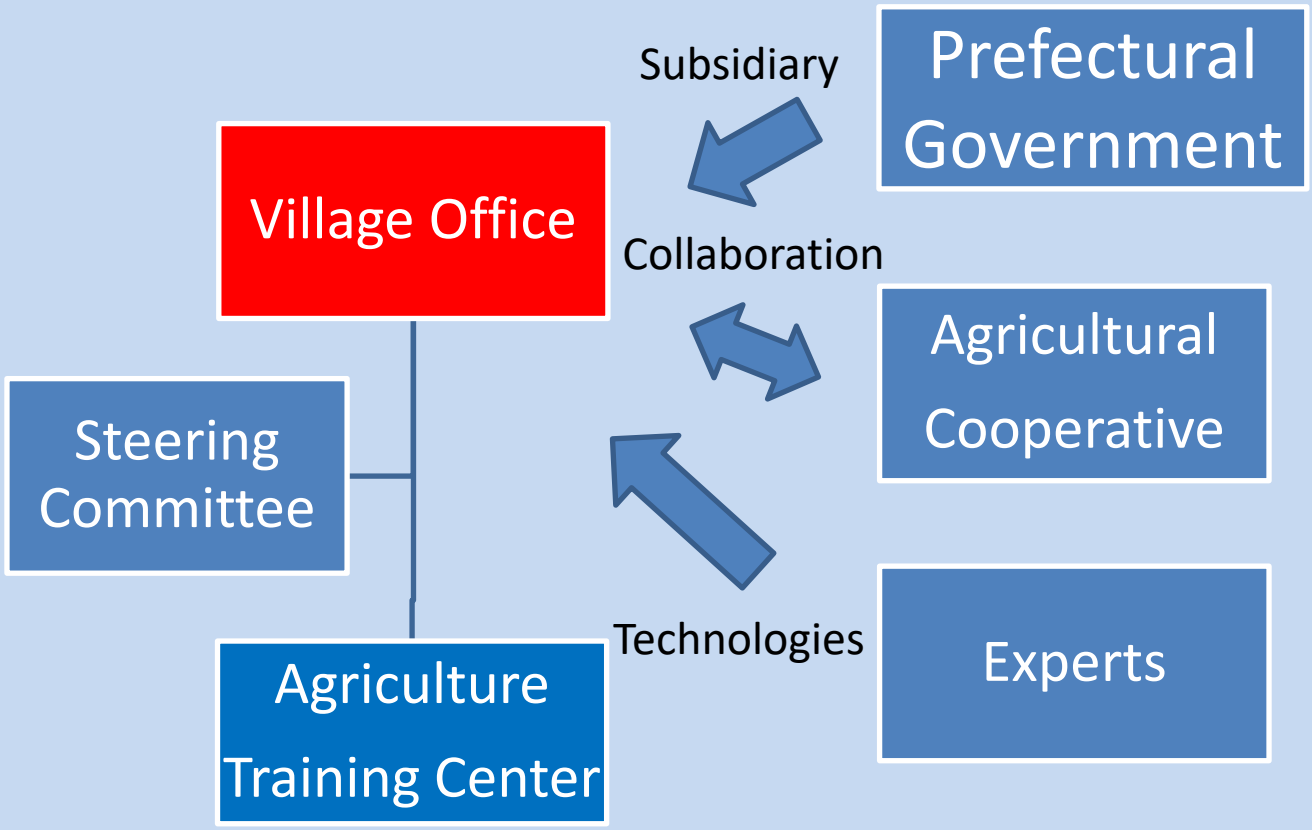
Preconditions

- Please list necessary resources before project begins.
  - Human resources
  - Technologies / Facilities and equipment
  - Funds / Financial resources



Implementing framework (Example)

Please draw a chart of a responsible institution and related organizations/departments/sections



Annual plan of implementation

Activity 1

No of Activities	Item	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
1-(1)	○○○												
1-(2)	■■■												
1-(3)	△△△												
1-(4)	× × ×												

Activity 2

No	Item	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
2-(1)	●●●												
2-(2)	□□□												
2-(3)	▲▲▲												
2-(4)	◇◇◇												

Cost Breakdown (Example)

	Period	Activity	Duration	Items	Cost
1-(1)	2022 Jun ～ 2022 September	Training of IT Basics	4 Month	・Allowance of lecturers ・Printed matters	$ 1,000
1-(2)	2022 September ～ 2022 October	Market price information gathering by farmers	2 Month	・Internet service providers charge ・IT consultant guidance fee	$ 500
2-(1)	2022 November ～ 2023 February	Marketing research	4 Month	・Consulting Fee	$2,000