Project Management

Miscellaneous Q&As (1)

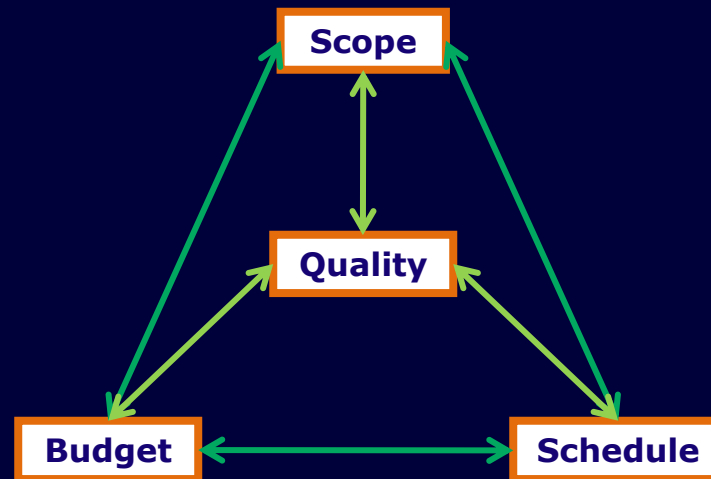neil@minkley.fr

Question 1

➢ A **project** is a unique endeavour to produce a set of deliverables within clearly specified ...., cost and quality constraints.

Answer 1

➢ A **project** is a unique endeavour to produce a set of deliverables within clearly specified **time**, cost and quality constraints.

```
              Scope
             ↗  ↕  ↖
            ↗   ↕   ↖
          Quality
         ↗   ↖   ↖
       ↙         ↘
   Budget ←──────→ Schedule
```

Question 2

> A **project manager's basic goal** is the successful completion of her/his project in compliance with its scope, schedule, ………… and quality requirements, in order to meet customer expectations.

Answer 2

➢ A **project manager's basic goal** is the successful completion of her/his project in compliance with its scope, schedule, **budget** and quality requirements, in order to meet customer expectations.
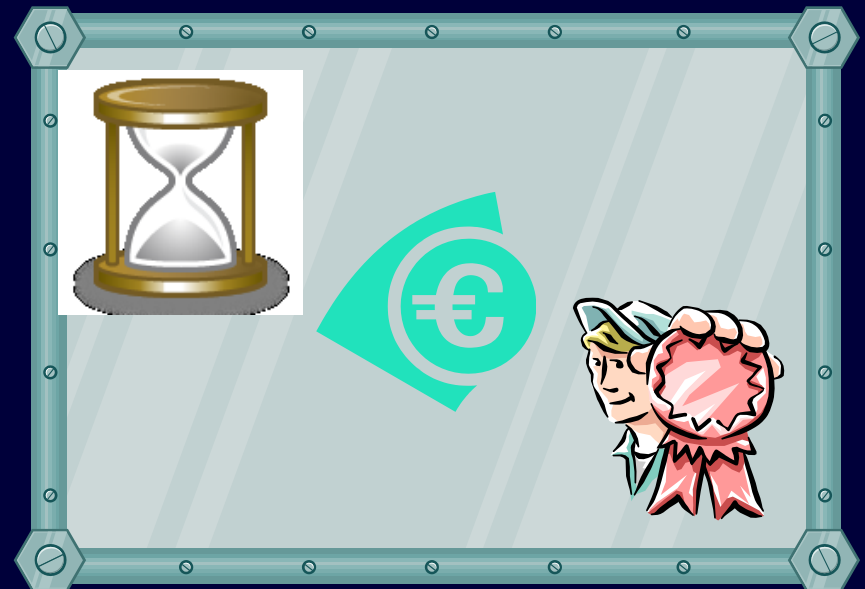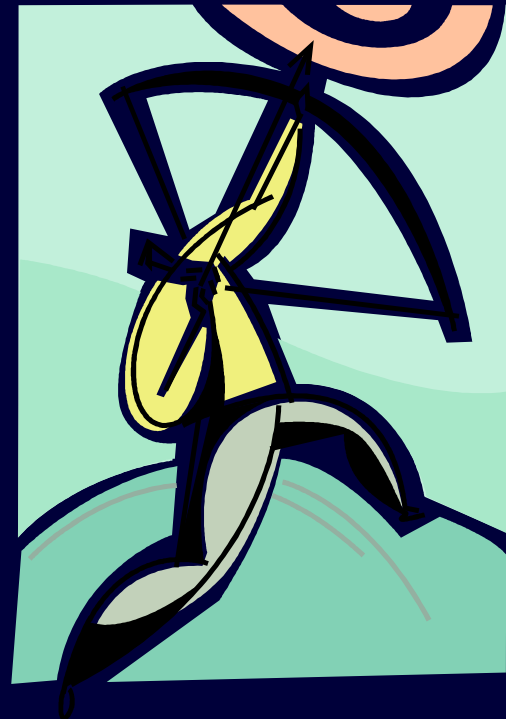
Question 3

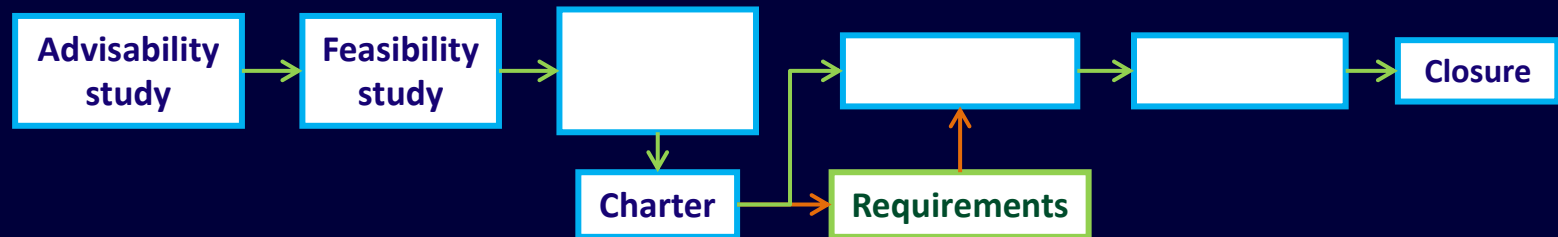➤ **Any objective should be "SMART", ie Specific, ..., Attainable, Realistic and Time-bound.**

Answer 3

➢ **Any objective should be "SMART", ie Specific, Measurable, Attainable, Realistic and Time-bound.**

Question 4

➢ **Mentally fill in the 3 empty rectangles in the following simplified diagram representing the main phases of the life cycle of a project.**

Answer 4 (1)

➢ **Mentally fill in the 3 empty rectangles in the following simplified diagram representing the main phases of the life cycle of a project.**

```
[Advisability   → [Feasibility  →  [Business  →  [            ] →  [          ] →  [Closure]
 study]           study]            case]
                                      ↓                 ↑
                                  [Charter] →→→ [Requirements]
```

Answer 4 (2)

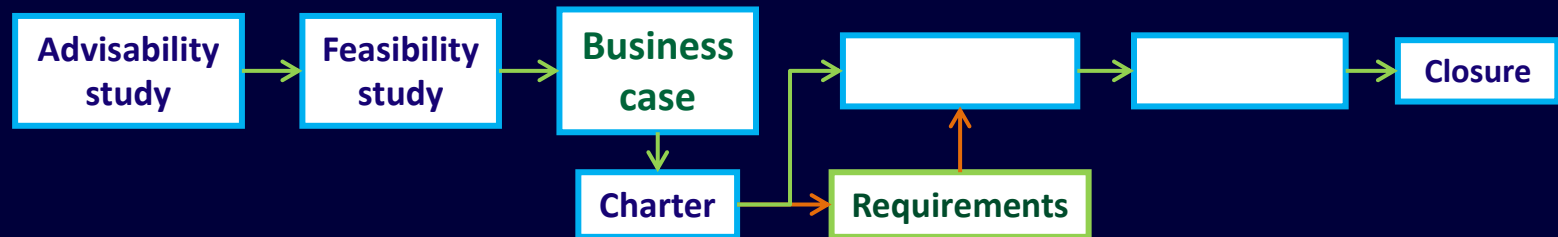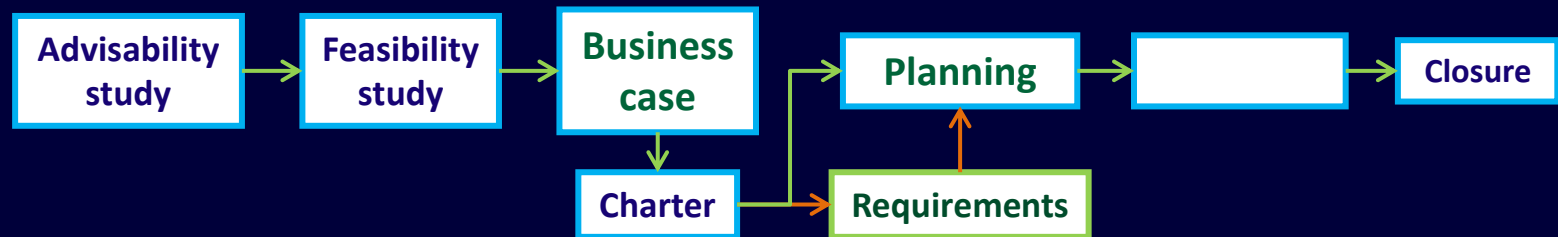➢ **Mentally fill in the 3 empty rectangles in the following simplified diagram representing the main phases of the life cycle of a project.**

```
┌────────────┐   ┌────────────┐   ┌────────────┐        ┌────────────┐   ┌────────────┐   ┌────────────┐
│ Advisability│→ │ Feasibility │→ │  Business  │   ┌──→│  Planning  │→ │            │→ │  Closure   │
│    study    │  │    study    │  │    case    │   │   │            │  │            │  │            │
└────────────┘   └────────────┘   └────────────┘   │   └────────────┘   └────────────┘   └────────────┘
                                         │          │         ↑
                                         ↓          │         │
                                   ┌──────────┐     │   ┌──────────────┐
                                   │ Charter  │──────→ │ Requirements │
                                   └──────────┘     └──└──────────────┘
```

Answer 4 (3: complete)

➢ **Mentally fill in the 3 empty rectangles in the following simplified diagram representing the main phases of the life cycle of a project.**

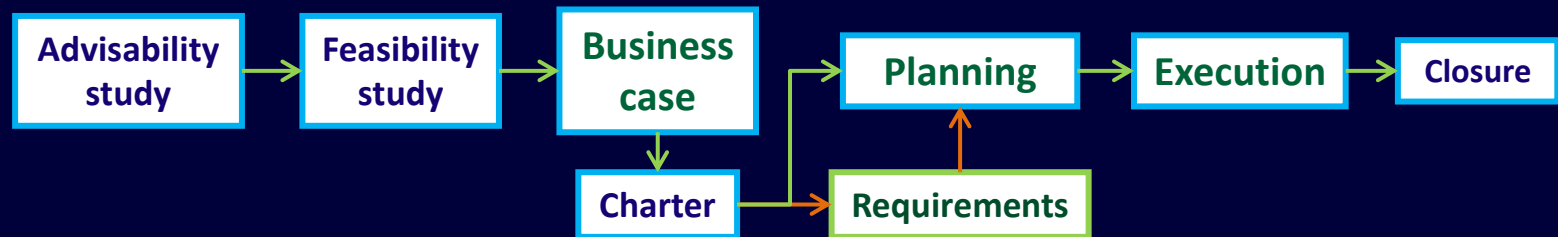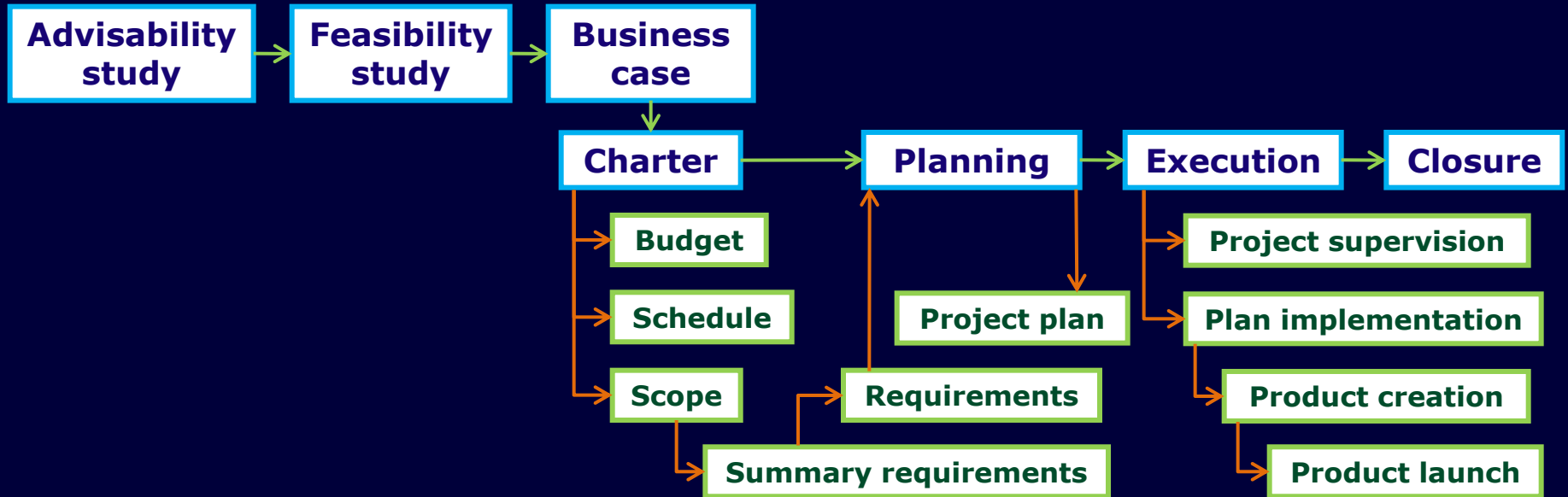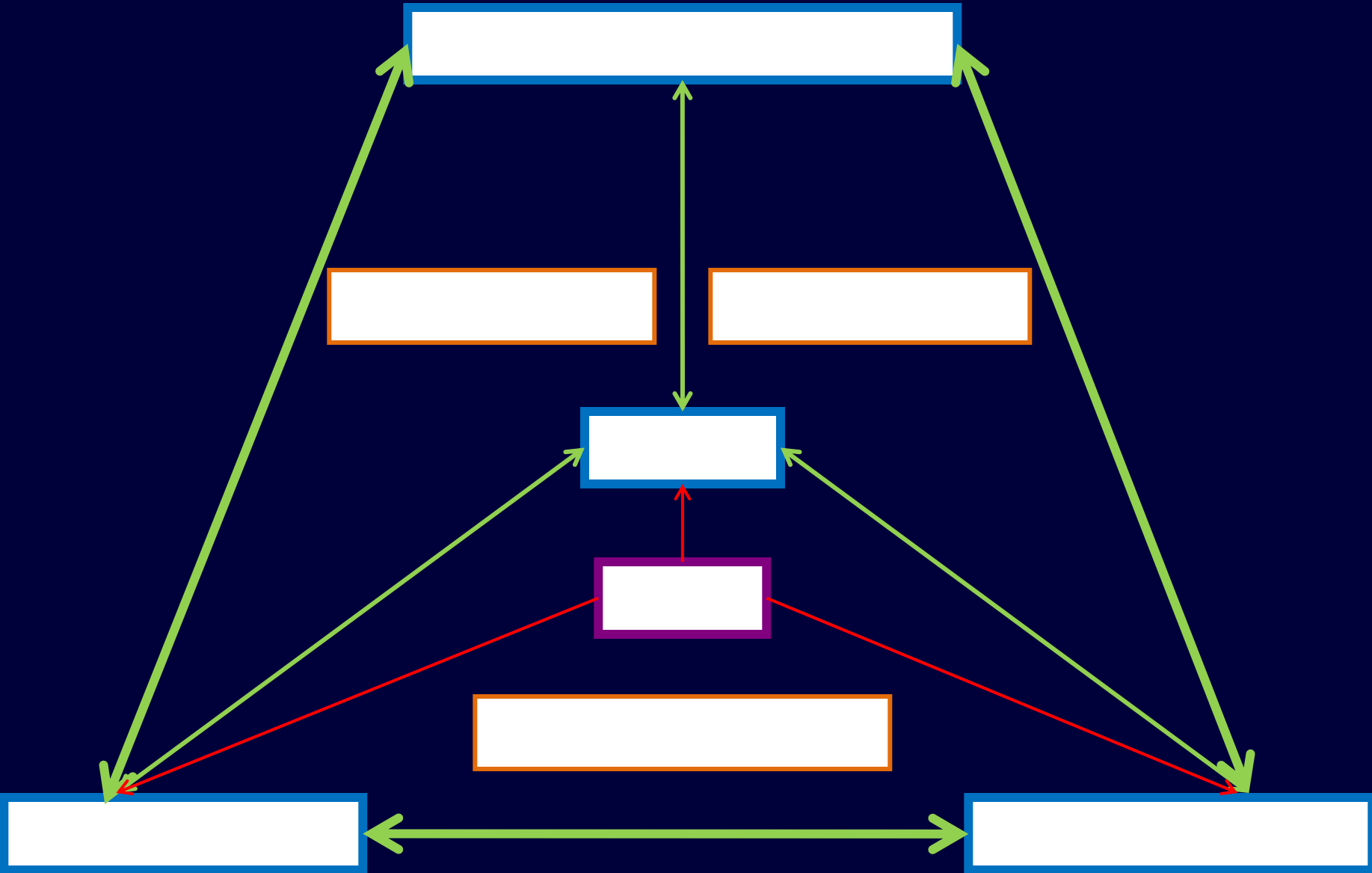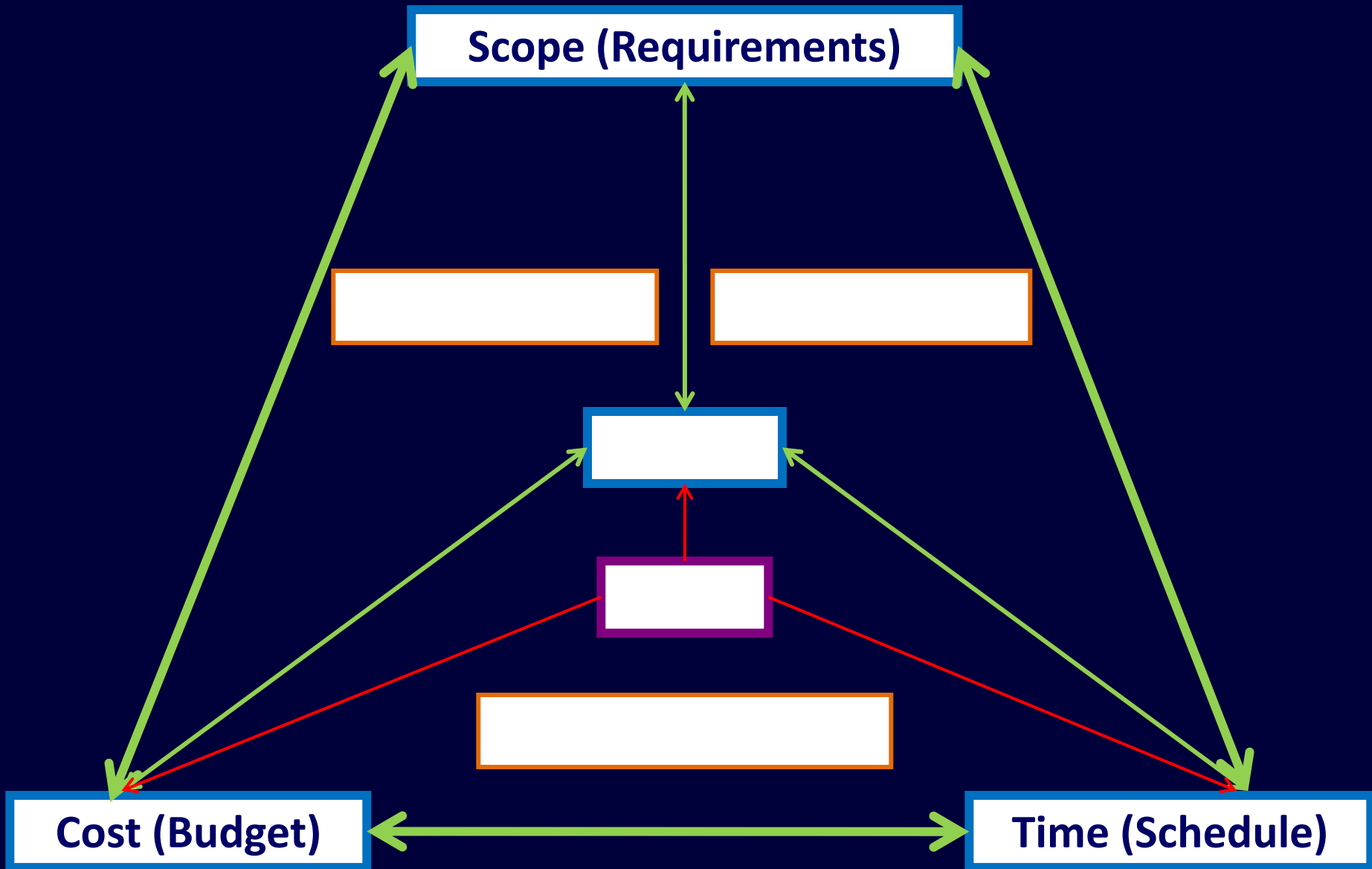# Reminder: project life cycle summary

Question 5 – text

➢ **Mentally fill in the rectangles in the diagram on the next page with the names of the main 8 areas of project management.**

Question 5 – diagram

Answer 5 – diagram (1)
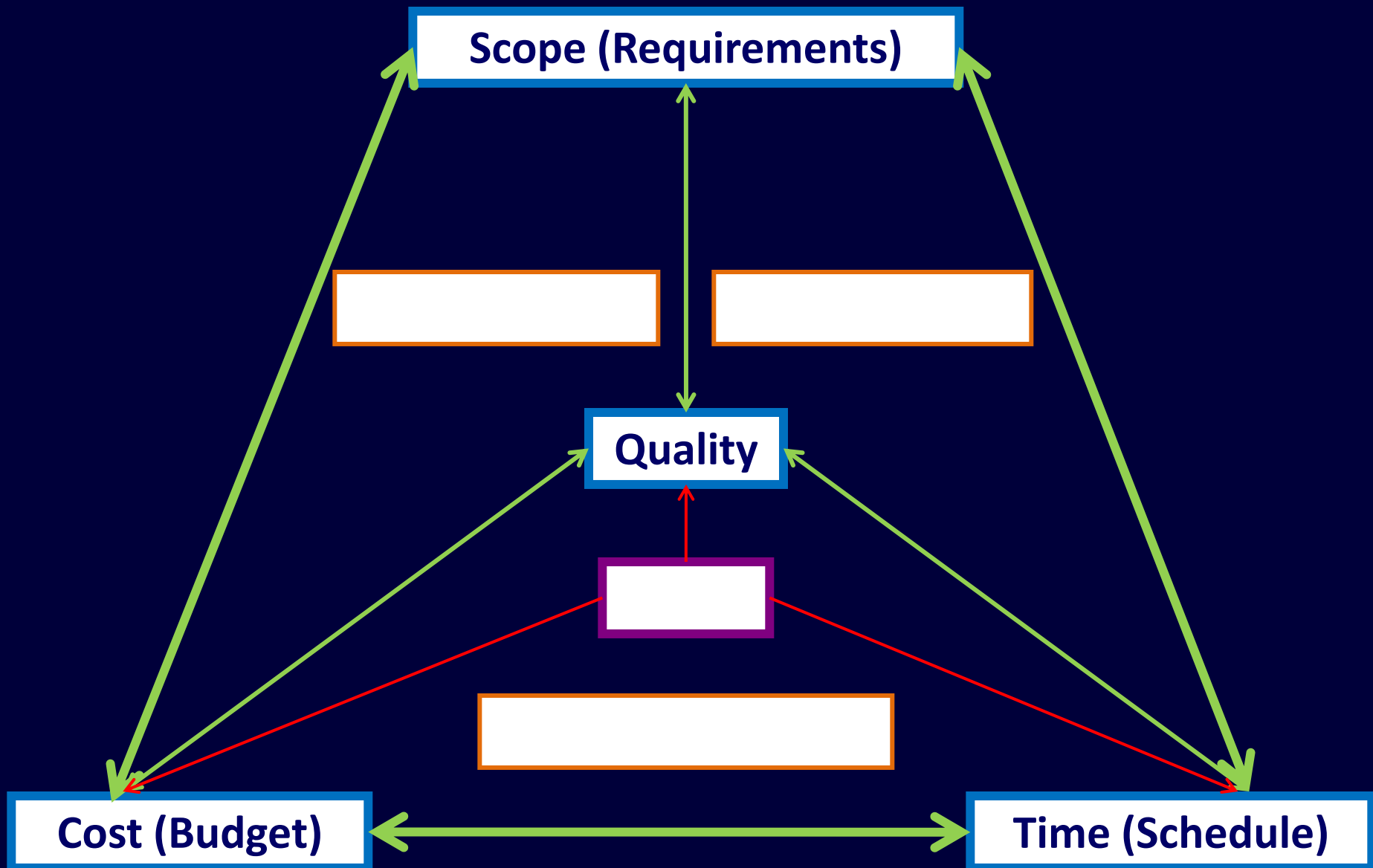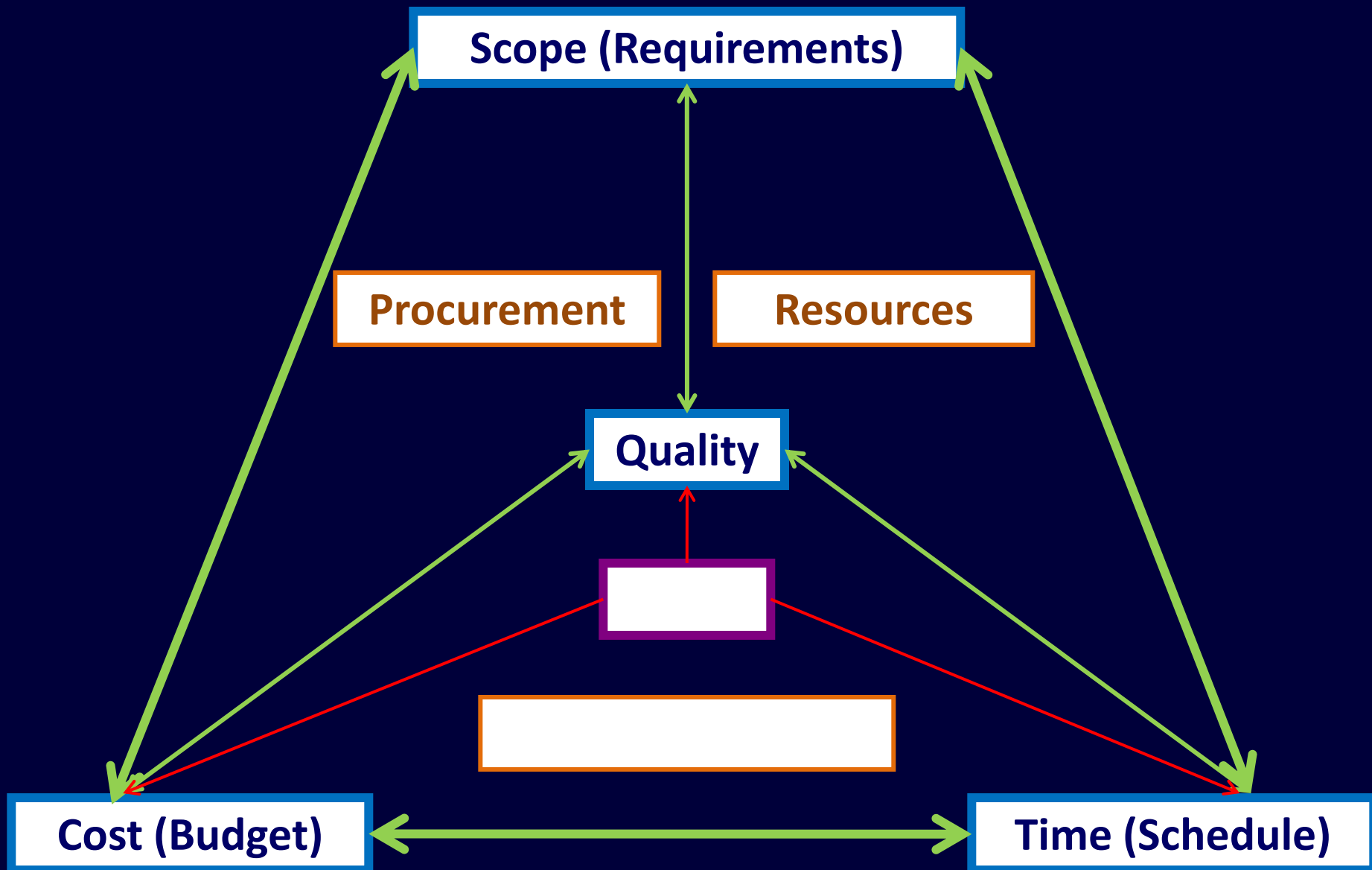

Scope (Requirements)

Cost (Budget)

Time (Schedule)

Answer 5 – diagram (2)

Scope (Requirements)

Quality

Cost (Budget)

Time (Schedule)

Answer 5 – diagram (3)
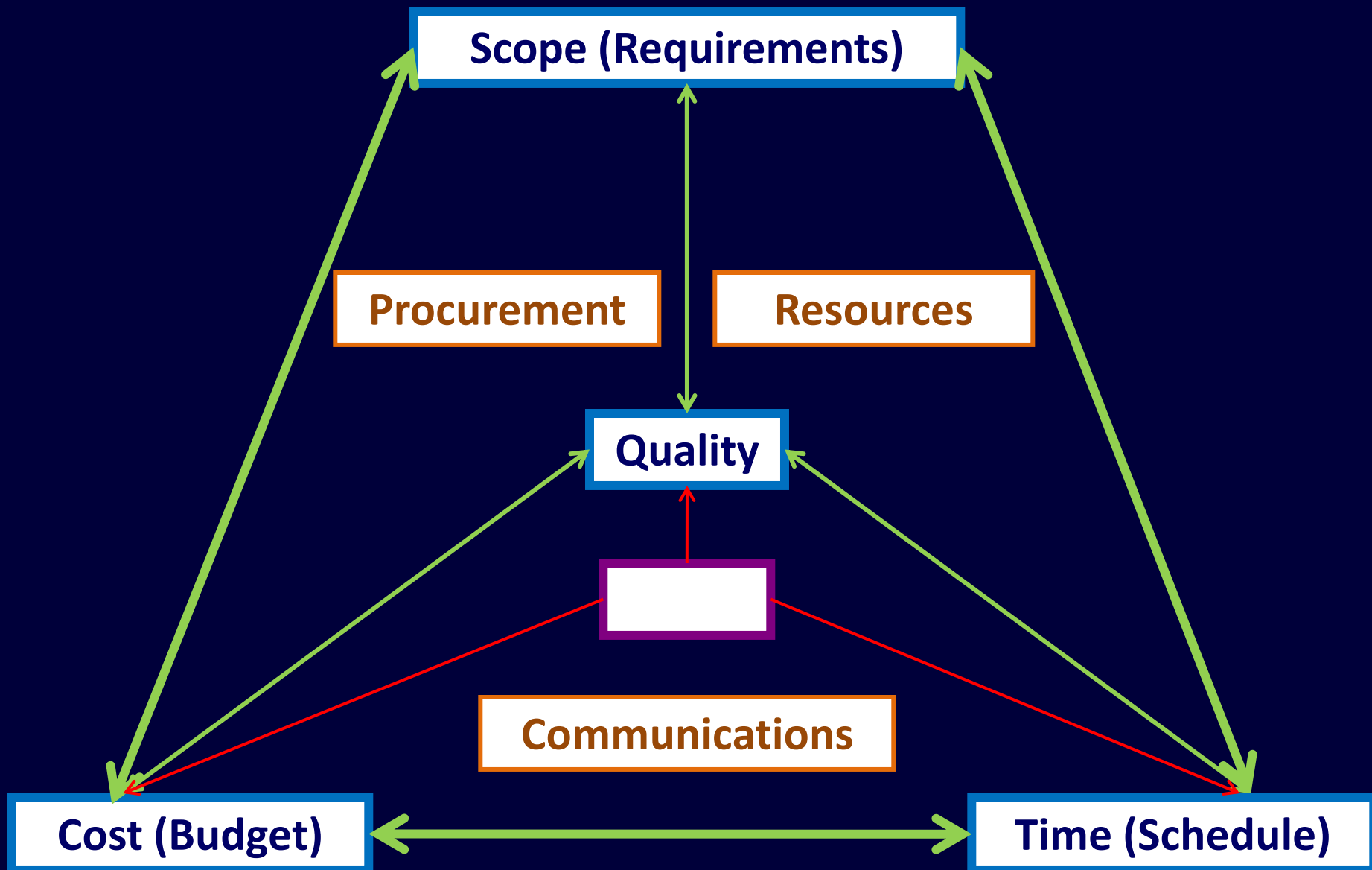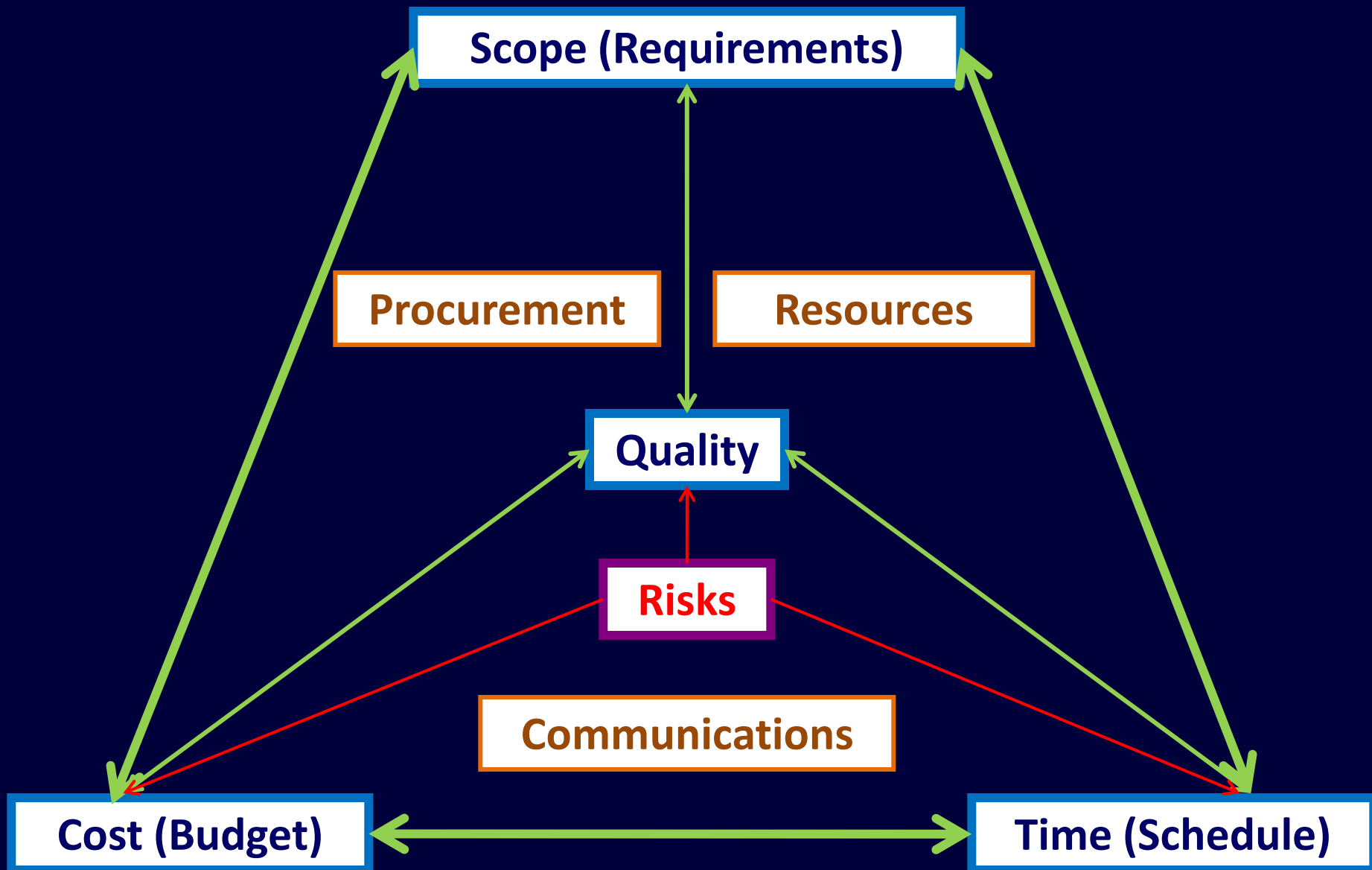
Answer 5 – diagram (4)

Answer 5 – diagram (5: complete!)

Question 6

➤ A **requirements specification** describes the expected result of a project, for example the **functionality** (functions & features) of a **product**. Such a **description** can be given in the form of **narrative text**. In what **other form** can a product's functionality be effectively described and summarized?
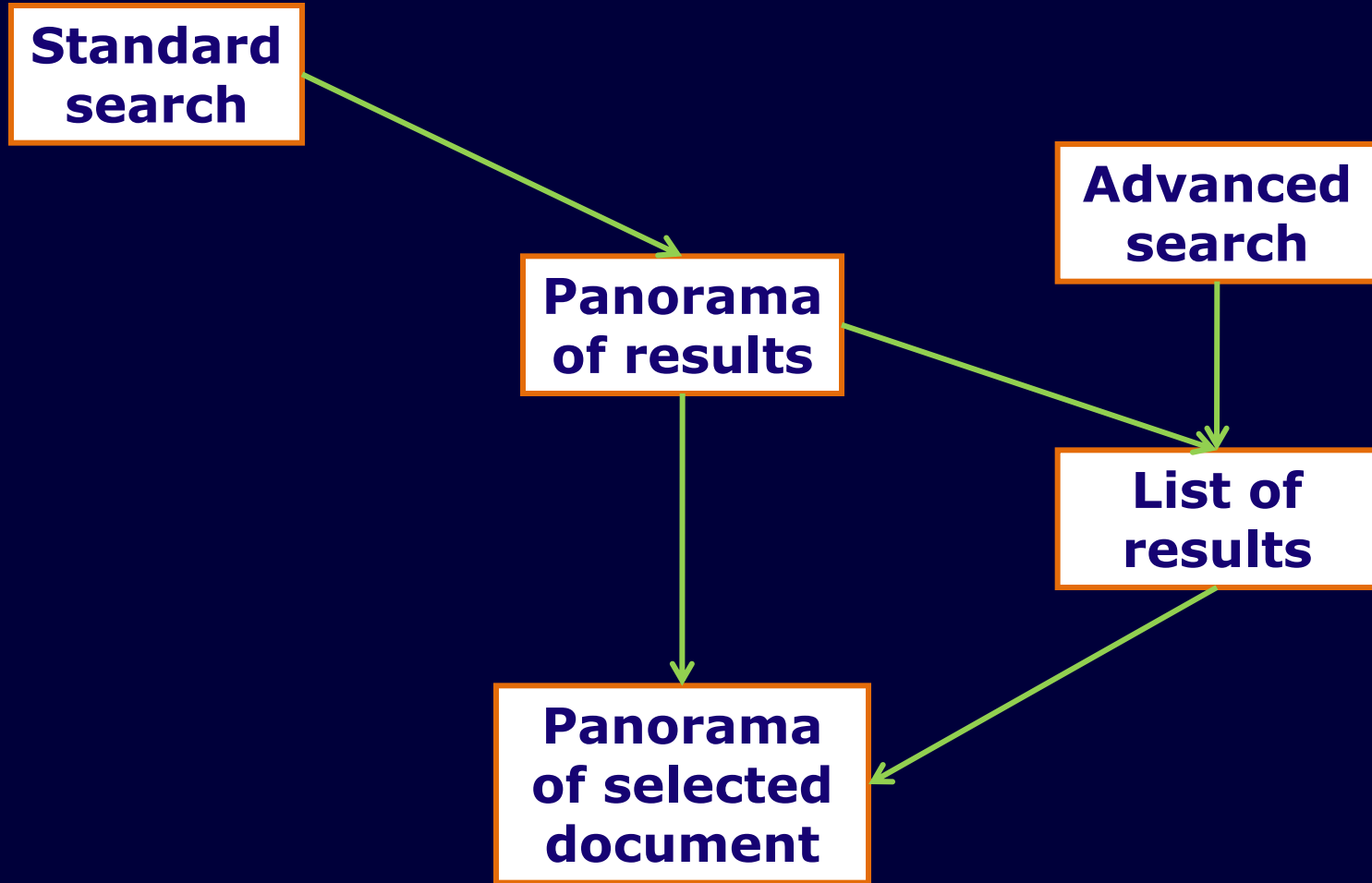
Answer 6

➢ A **requirements specification** describes the expected result of a project, for example the **functionality** (functions & features) of a **product**. Such a **description** can be given in the form of **narrative text**. In what **other form** can a product's functionality be effectively described and summarized?

➡ **In graphical form**

Example: graphical representation (1)

Example: graphical representation (2)

Top banner

Standard search | Other functions

Central area

Advanced search

Search by topic

Switch to list

Other links

Preview of rank 1 result

More...

Other documents preview

Other links

Left area

Preview of rank 2 result

More...

Preview of rank 3 result

More...

Preview of related media

Right area

Example: graphical representation (3)

Occasional visitor / Potential subscriber → **Standard search** → **Panorama of results** _More..._ → **Subscribe?**

N   Y

Subscription

Subscriber → **Standard search** → **Panorama of results** _More..._ → **Panorama of selected document**

Login / pwd or IP address for 1st session
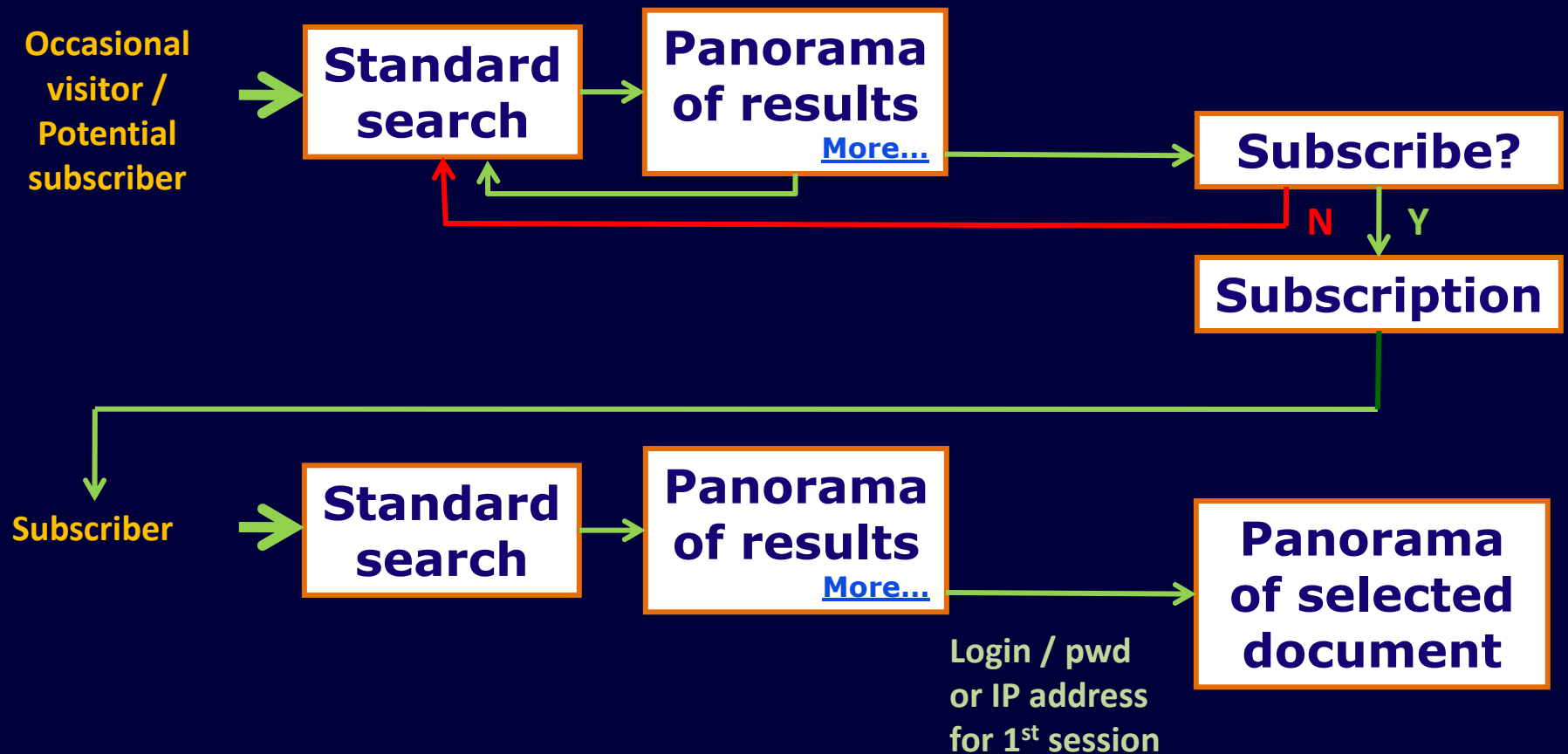
Question 7

➤ **The "4 Ps" of the marketing mix correspond to "Product", "..............................", "Place" and "Promotion".**

Answer 7

➢ **The "4 Ps" of the marketing mix correspond to "Product", "Price", "Place" and "Promotion".**

Product

4

Price

Place

Promotion

Question 8

> **Does the business model adopted for a product have any influence on the design and development of the product?**

No ☐   Yes ☐

Answer 8

➢ **Does the business model adopted for a product have any influence on the design and development of the product?**

No ☐   Yes ✔

Reminder: price and business model

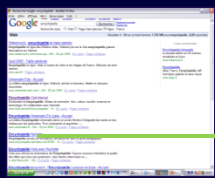➢ **Market demand & supply**

➢ **Direct impact on product**

➢ **Sales channels**

➢ **How revenue is generated**

GENERAL PUBLIC (DIRECT)

Online EHM Business Model

INSTITUTIONS (DIRECT)

Subscribers

Intranets, eg Lagardère

Public libraries, eg Ville de Massy

Businesses, eg *Le Figaro* (editors)

Authentication

Search engines, eg Google, with keyword *encyclopédie*

EHM free of charge

Subscription

HM site

Institutions abroad, eg LearnAlberta

Institutions abroad, eg Institut canadien du service extérieur

DHO

Fee-based EHM

LOs
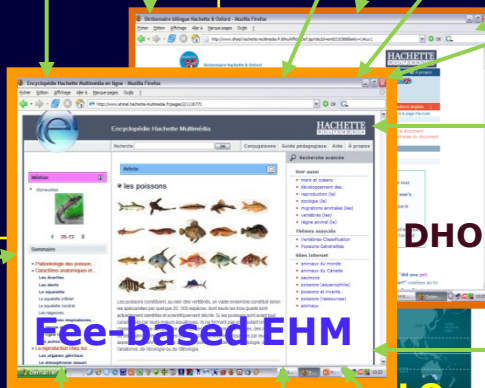
Club-Internet subscribers
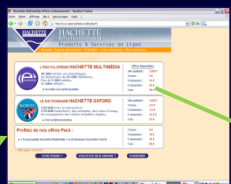
Subscription

Affiliated site users, eg (hypothetical) *Le Monde*
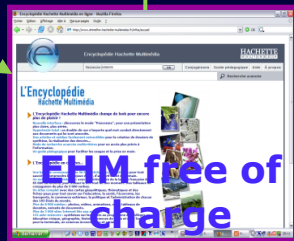
EHM free of charge

Authentication

Subscribers
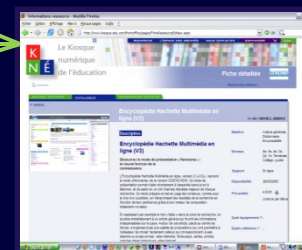
French schools via the **KNÉ**

Canadian institutional customers via De Marque
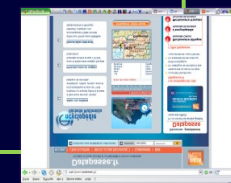
Business customers via DataPasse (IDM)

GENERAL PUBLIC (INDIRECT)

INSTITUTIONS (INDIRECT)

Question 9 – text

➢ **Mentally complete the network diagram on the next page by drawing the 2 arrows that are missing.**

Question 9 – diagram

Answer 9 (1)

Answer 9 (2: complete)

```
Agree on
requirements &
site design

Set up logistics &
administrative
processes

Establish list
of articles

Determine price
of each article

Make
pictures of
articles

2

Write short description
of each article

Translate article
descriptions

Write sales terms
& conditions

Translate sales terms
& conditions

1

Code (program) site

Integrate
content

Integrate
payment
system

Test &
debug
site

Accept &
Publish
site

Overall project management

Project
closure
```

Question 10

➢ **What are the 5 planning processes involved in establishing a project's schedule, given its scope and requirements?**

  ✓ **Project's scope and requirements.**

  1) **…**

  2) **…**

  3) **…**

  4) **…**

  5) **…**

  ➢ **Project's schedule.**

➢ **What are the 5 planning processes involved in establishing a project's schedule, given its scope and requirements?**

✓ **Project's scope and requirements.**

1) **Create the Work Breakdown Structure (WBS).**

2) **...**

3) **...**

4) **...**

5) **...**

➢ **Project's schedule.**

➢ **What are the 5 planning processes involved in establishing a project's schedule, given its scope and requirements?**

✓ **Project's scope and requirements.**

1) **Create the Work Breakdown Structure (WBS).**

2) **Define tasks.**

3) **…**

4) **…**

5) **…**

➢ **Project's schedule.**

➢ **What are the 5 planning processes involved in establishing a project's schedule, given its scope and requirements?**

✓ **Project's scope and requirements.**

1) **Create the Work Breakdown Structure (WBS).**

2) **Define tasks.**

3) **Sequence tasks.**

4) **…**

5) **…**

➢ **Project's schedule.**

➢ **What are the 5 planning processes involved in establishing a project's schedule, given its scope and requirements?**

  ✓ **Project's scope and requirements.**

  1) **Create the Work Breakdown Structure (WBS).**

  2) **Define tasks.**

  3) **Sequence tasks.**

  4) **Estimate task resources.**

  5) **…**

  ➢ **Project's schedule.**

Answer 10 (5 of 5: complete!)

➢ **What are the 5 planning processes involved in establishing a project's schedule, given its scope and requirements?**

   ✓ **Project's scope and requirements.**

   1) **Create the Work Breakdown Structure (WBS).**

   2) **Define tasks.**

   3) **Sequence tasks.**

   4) **Estimate task resources.**

   5) **Estimate task durations.**

   ➢ **Project's schedule.**

Reminder: Project planning processes
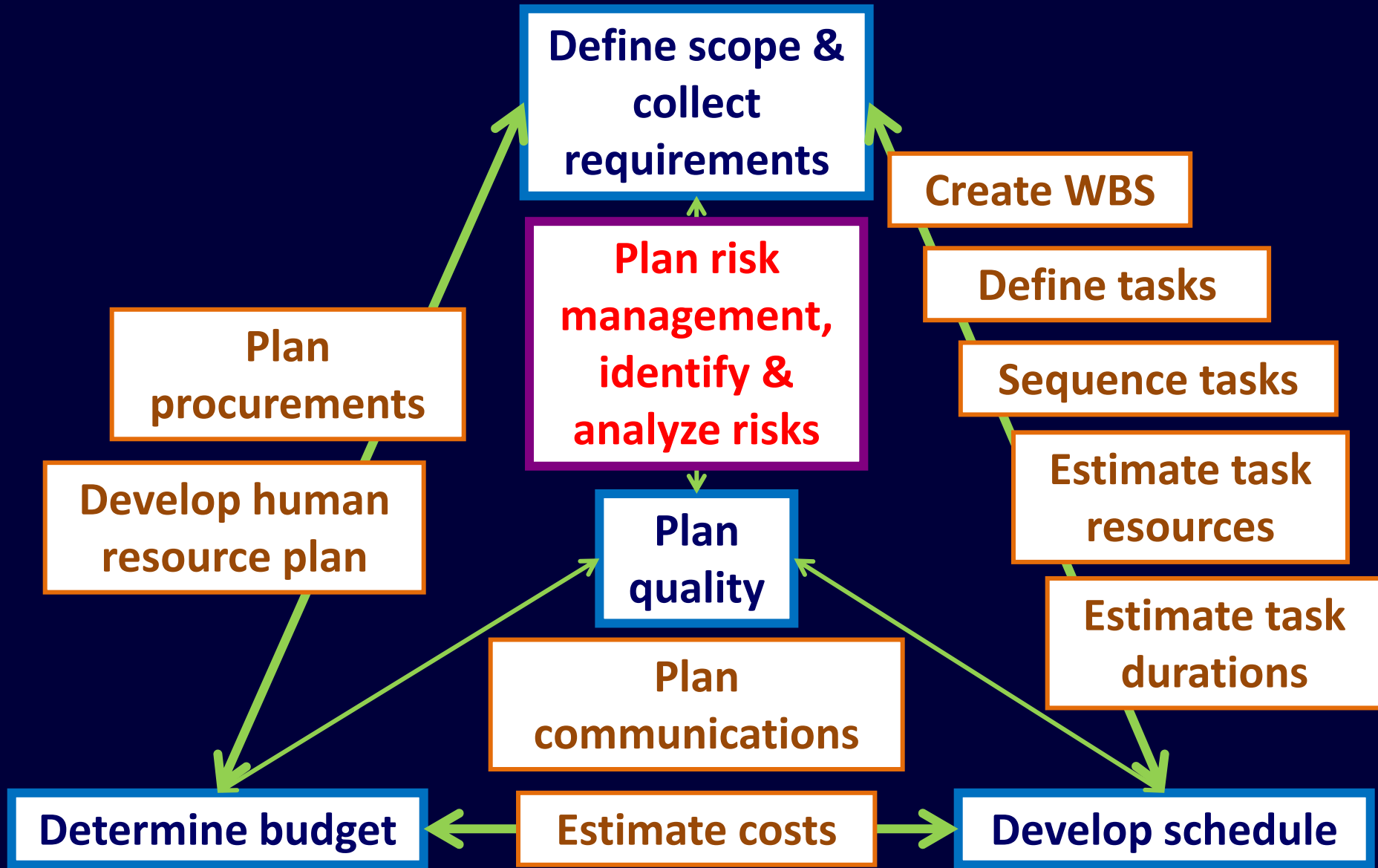
Question 11 – text

➢ **Mentally enter "Duration" and "Predecessors" information respectively in rectangles 1 and 4 and rectangles 2, 3, 5, 6 and 7 in the picture on the next page so that the information is consistent with the sequence of tasks for two work packages shown in the network diagrams in the right part of the picture.**

(For practical purposes in this exercise, testing & debugging of a component are completed simultaneously, as shown in the 1st network diagram, and translation does not start until writing in French has been completed, as shown in the 2nd network diagram. Also note that no work is done during weekends.)

Question 11 – Gantt view
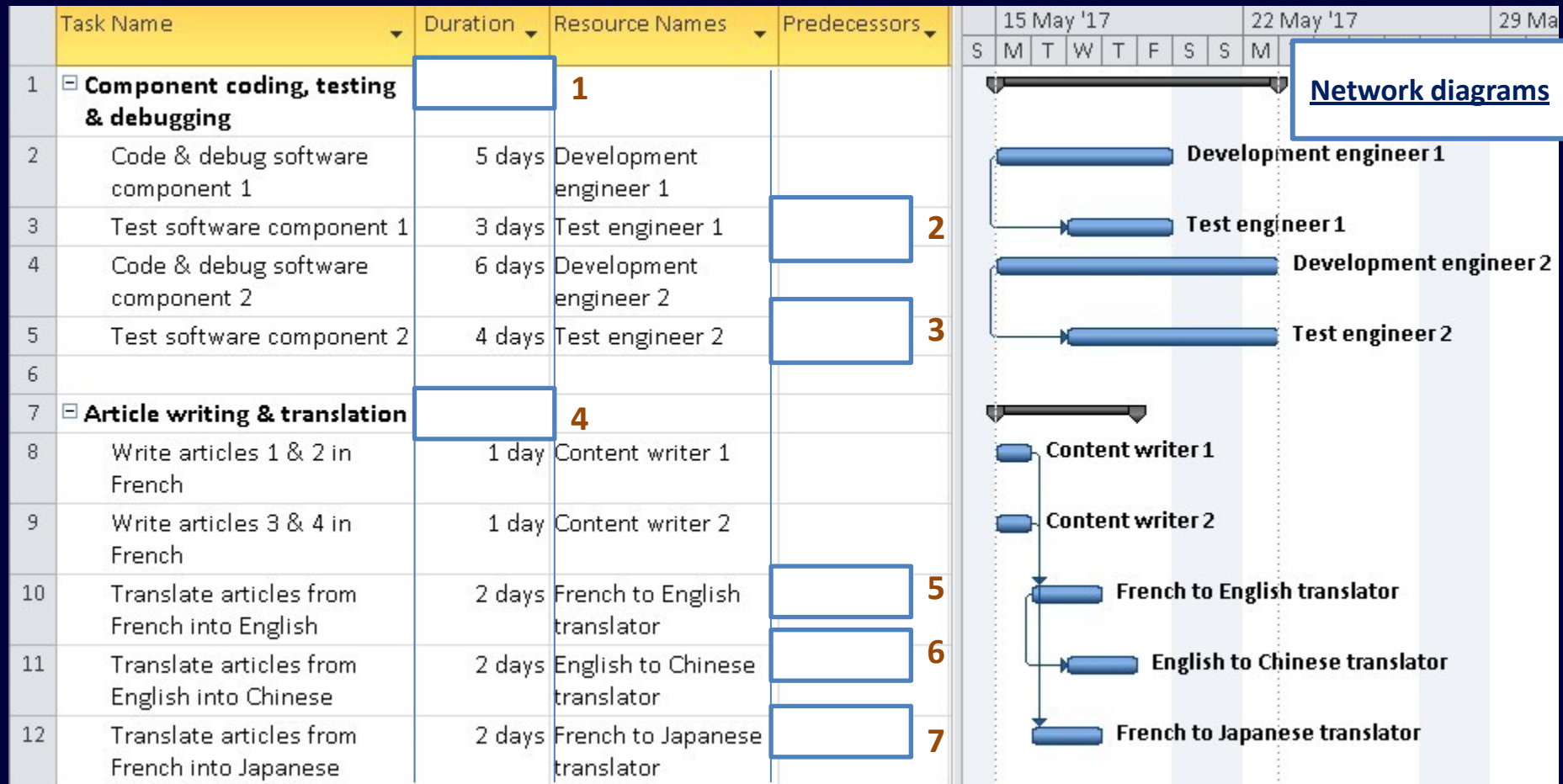
Task Name	Duration	Resource Names	Predecessors		15 May '17	22 May '17	29 Ma
					S M T W T F S S M		
1 ⊟ **Component coding, testing & debugging**	[ ] 1					**Network diagrams**	
2 Code & debug software component 1	5 days	Development engineer 1			Development engineer 1		
3 Test software component 1	3 days	Test engineer 1	[ ] 2		Test engineer 1		
4 Code & debug software component 2	6 days	Development engineer 2			Development engineer 2		
5 Test software component 2	4 days	Test engineer 2	[ ] 3		Test engineer 2		
6							
7 ⊟ **Article writing & translation**	[ ] 4						
8 Write articles 1 & 2 in French	1 day	Content writer 1			Content writer 1		
9 Write articles 3 & 4 in French	1 day	Content writer 2			Content writer 2		
10 Translate articles from French into English	2 days	French to English translator	[ ] 5		French to English translator		
11 Translate articles from English into Chinese	2 days	English to Chinese translator	[ ] 6		English to Chinese translator		
12 Translate articles from French into Japanese	2 days	French to Japanese translator	[ ] 7		French to Japanese translator		

Answer 11 – part 1

	Task Name	Duration	Resource Names	Predecessors		15 May '17	22 May '17	29 Ma
1	**Component coding, testing & debugging**	**6 days**			1		**Network diagram**	
2	Code & debug software component 1	5 days	Development engineer 1			Development engineer 1		
3	Test software component 1	3 days	Test engineer 1	2SS+2 days	2	Test engineer 1		
4	Code & debug software component 2	6 days	Development engineer 2			Development engineer 2		
5	Test software component 2	4 days	Test engineer 2	4SS+2 days	3	Test engineer 2		

Answer 11 – part 2

Task Name	Duration	Resource Names	Predecessors	15 May '17	22 May '17	29 Ma

	Task Name	Duration	Resource Names	Predecessors	Gantt
7	**Article writing & translation**	**4 days** **4**			
8	Write articles 1 & 2 in French	1 day	Content writer 1		Content writer 1
9	Write articles 3 & 4 in French	1 day	Content writer 2		Content writer 2
10	Translate articles from French into English	2 days	French to English translator	8;9 **5**	French to English translator
11	Translate articles from English into Chinese	2 days	English to Chinese translator	10SS+1 day **6**	English to Chinese translator
12	Translate articles from French into Japanese	2 days	French to Japanese translator	8;9 **7**	French to Japanese translator

Network diagram

Answer 11 – complete

	Task Name	Duration	Resource Names	Predecessors	
1	☐ **Component coding, testing & debugging**	**6 days**			1
2	Code & debug software component 1	5 days	Development engineer 1		
3	Test software component 1	3 days	Test engineer 1	2SS+2 days	2
4	Code & debug software component 2	6 days	Development engineer 2		
5	Test software component 2	4 days	Test engineer 2	4SS+2 days	3
6					
7	☐ **Article writing & translation**	**4 days**			4
8	Write articles 1 & 2 in French	1 day	Content writer 1		
9	Write articles 3 & 4 in French	1 day	Content writer 2		
10	Translate articles from French into English	2 days	French to English translator	8;9	5
11	Translate articles from English into Chinese	2 days	English to Chinese translator	10SS+1 day	6
12	Translate articles from French into Japanese	2 days	French to Japanese translator	8;9	7

Network diagrams

Question 12 – text

➢ **Take into account the "Resource" and "Duration" information provided in the excerpts of a Resource Sheet and Gantt view on the next page to calculate the "Work(load)" (in person-days) and "Cost" (in €) of the featured "Task", then mentally enter the values respectively in <u>rectangles 1 and 2</u>.**

Question 12 – Res'rce sheet & Gantt view

Resource Name	Type	Max. Units	Std. Rate
R1	Work	100%	€ 400/day
R2	Work	100%	€ 360/day
R3	Work	100%	€ 320/day

Task Name	Duration	Resource Names	Work	Cost
Task	12 days	R1;R2[75%];R3[25%]		

1 **2**

Answer 12 – part 1

Resource Name	Type	Max. Units	Std. Rate
R1	Work	100%	€ 400/day
R2	Work	100%	€ 360/day
R3	Work	100%	€ 320/day

Task Name	Duration	Resource Names	Work	Cost
Task	12 days	R1;R2[75%];R3[25%]	24 days	
			1	**2**

Workload: 12 + 9 + 3 = 24 person-days

Answer 12 – complete

Resource Name	Type	Max. Units	Std. Rate
R1	Work	100%	€ 400/day
R2	Work	100%	€ 360/day
R3	Work	100%	€ 320/day

Task Name	Duration	Resource Names	Work	Cost
Task	12 days	R1;R2[75%];R3[25%]	24 days	€ 9 000
			1	**2**

Workload: 12 + 9 + 3 = 24 person-days

Cost: 12 x 400 + 9 x 360 + 3 x 320 = € 9,000

Question 13

➢ **As a project manager working for a software development contractor, you have estimated that the total cost of the work to be done for a client amounts to € 100,000 (including a "management reserve" to cover any possible estimation error). Assuming that your management requires a 20% profit margin, what price should the client be quoted?**

⟶ Price = € …………..

Answer 13

➢ **As a project manager working for a software development contractor, you have estimated that the total cost of the work to be done for a client amounts to € 100,000 (including a "management reserve" to cover any possible estimation error). Assuming that your management requires a 20% profit margin, what price should the client be quoted?**

⟶ **Price = € 125,000**

Answer 13 (illustrated)

125K

100K **25K**

Price **Cost**

- **Margin% = Margin / Price**

- **Margin% = (Price - Cost) / Price**

- **Margin% = 1 - Cost / Price**

- **Cost / Price = 1 - Margin%**

- **Price / Cost = 1 / (1 - Margin%)**

- ➢ **Price = Cost / (1 - Margin%)**

- **Margin% = 20% = 0.20 = 1/5**

- **Price = Cost / (1 - 1/5) = Cost / 4/5 = Cost x 5/4 = (Cost / 4) x 5**

- **Cost = 100K**

- ➢ **Price = 100K x 5/4 = (100K / 4) x 5 = 25K x 5 = 125K**

Question 14

➢ **Which of the following statements related to project risks are generally true?**

Minimizing/eliminating a risk may require adding tasks and/or resources.

Minimizing/eliminating a risk may result in additional costs.

Minimizing/eliminating a risk may result in a modification of the scope and requirements.

Minimizing/eliminating a risk should be postponed until the risk materializes.

Answer 14

➢ **Which of the following statements related to project risks are generally true?**

Minimizing/eliminating a risk may require adding tasks and/or resources. ✅

Minimizing/eliminating a risk may result in additional costs. ✅

Minimizing/eliminating a risk may result in a modification of the scope and requirements. ✅

Minimizing/eliminating a risk should be postponed until the risk materializes. ☐