



CONFIDENTIAL

7 Step problem-solving

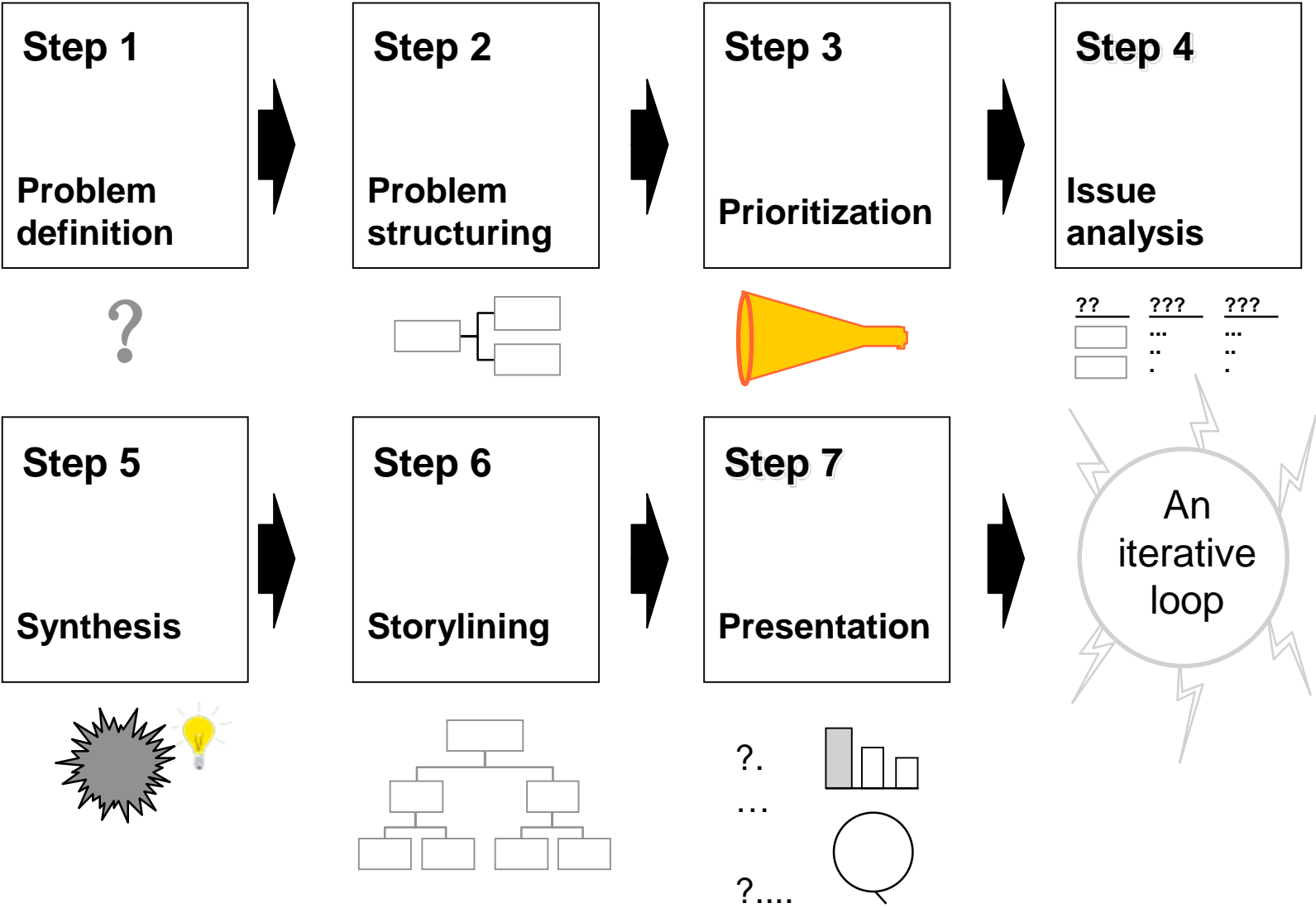
AGENDA

Overview of 7 steps	9:00 - 9:15
Step 1: Problem definition	9:15 - 9:30
Step 2: Problem structuring	9:30 - 10:30
Step 3: Prioritization	10:30 - 11:00
Step 4: Issue analysis	11:00 - 11:30
Step 5: Synthesis	11:30 - 12:00
Lunch	12:00 - 1:00
Step 6: Storylining using pyramid principle	1:00 - 3:00
Step 7: Presentation - Saying it with Charts	3:00 - 5:00

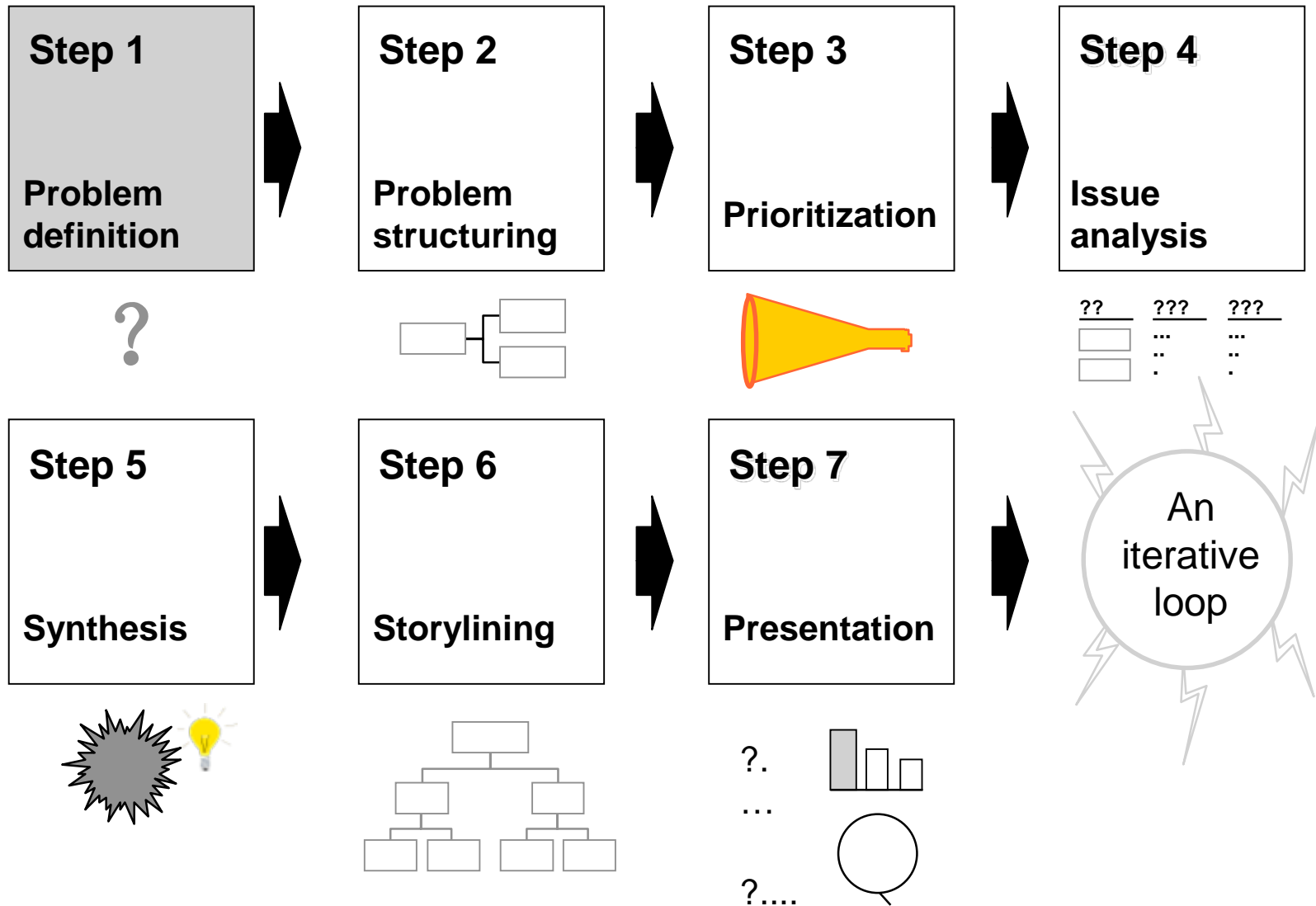
OBJECTIVES

- Learn how to tackle and develop a logical approach to solving major problems
 - Clearly understanding the key question to solve
 - Break down major problems into smaller issues
 - Prioritizing each issues and understand which data/analysis is needed
 - Synthesize findings into pyramid principle of communication and storytelling
 - Clear presentation charts

7-STEP PROBLEM SOLVING LOOP



7-STEP PROBLEM SOLVING LOOP



STEP 1 - PROBLEM STATEMENT WORKSHEET

Basic question

Synthesize your problem down to 1-2 sentences (the elevator speech). Define what must be resolved to deliver impact on a business problem (not a technical solution, e.g. how to install a server).

1. Context

Sets out the situation and complication facing the team, which would later on be the foundation of the governing thought – *e.g., industry trends, relative position in the industry*

4. Constraints within solution space

Defines the limits of the set of solutions to consider by revisit the issue tree on regular basis – *e.g., must involve organic, rather than inorganic, growth*

2. Criteria for success

Defines success for the project. Must be shared by client and team and must include relevant qualitative and quantitative measures – *e.g., impact and impact timing, visibility of improvement, client mindset shifts*

5. Stakeholders

Identifies who makes the decisions and who else could support (or derail) the study – *e.g., CEO, division manager, SBU manager, key outside influencers*

3. Scope of solution space

Indicates what the study will and will not include, and try to be as inclusive as possible – *e.g., international markets, research and development activities, uncontrolled corporate costs*

6. Key sources of insight

Identifies where best-practice expertise, knowledge, and program approaches exist (internal and external of the team) – *e.g., experts, previous projects, senior level managers*

CHARACTERISTICS OF A GOOD PROBLEM STATEMENT

- A statement becomes the overarching governing thoughts along the way
- A debatable thought-provoking question (not a statement of fact or non-disputable assertion)
- A meaningful business problem, e.g. organizational, operational, or strategic related; not a technical questions, e.g. how to install a server
- Actionable and focused on what the decision maker needs to move forward
- Specific problem, not general
- Broad solution space, not narrow

BEST PRACTICES TO PRESSURE TEST PROBLEM STATEMENT

Approach	Questions
State the problem	<ul style="list-style-type: none">• How would you describe the problem in one sentence?
Understand the framing	<ul style="list-style-type: none">• Does the language of the problem statement introduce any unwarranted constraints? How could the problem be restated?
Check the scope	<ul style="list-style-type: none">• Is there a bigger adjacent problem? What are you solving for?• Who is the client in a real sense?
Evaluate assumptions	<ul style="list-style-type: none">• What are your core beliefs about the problem? What evidence supports them?• What other assumptions have you or your client made? How solid are they?

PROBLEM STATEMENT EXAMPLE – CSMB NB SOURCING STRATEGY

Basic Question

What is the sourcing strategy and optimize TAM allocation for consumer notebooks in next 1-2 years?

1. Perspectives/Context

Currently, each business unit has been sourcing notebooks separately and lacks communication. However, all the suppliers are the same, and they treat us as one customer instead of multiple. Need an integrated approach to sourcing

4. Other key study

Operations engineering heads
Quality heads
Service heads

2. Criteria for success

One integrated strategy to sourcing notebooks and agreed upon by **all business unit leaders**. Successful implementation of new strategy among across business units.

5. Constraints within

Small suppliers will not be considered in this study. Relations with certain key suppliers should be maintained

3. Decision makers

CPO
Procurement heads from each business unit. Product development group heads

6. Scope of solution space

Only notebook and netbooks for consumer will be included. Exclude enterprise business unit and hand phones.

PROBLEM STATEMENT EXAMPLE – CSMB NB TRANSITION STRATEGY

Basic Question

What is the transition strategy for CSMB NB

1. Perspectives/Context

Transition from predecessor to successor has been a challenging task for almost all teams of the organization. CoS & E&O are the 2 major concerns, but difficult to find a balancing point that can achieve good result.

4. Other key study

MKT teams
ODM suppliers

2. Criteria for success

No gap out between predecessor & successor
No E&O materials
Meeting the market required timing

5. Constraints within

Intel roadmap
Competitors product lines availability
LTS margin guide line

3. Decision makers

Regional CoC, PLM team
Sustaining Core Team & NPI Core Team

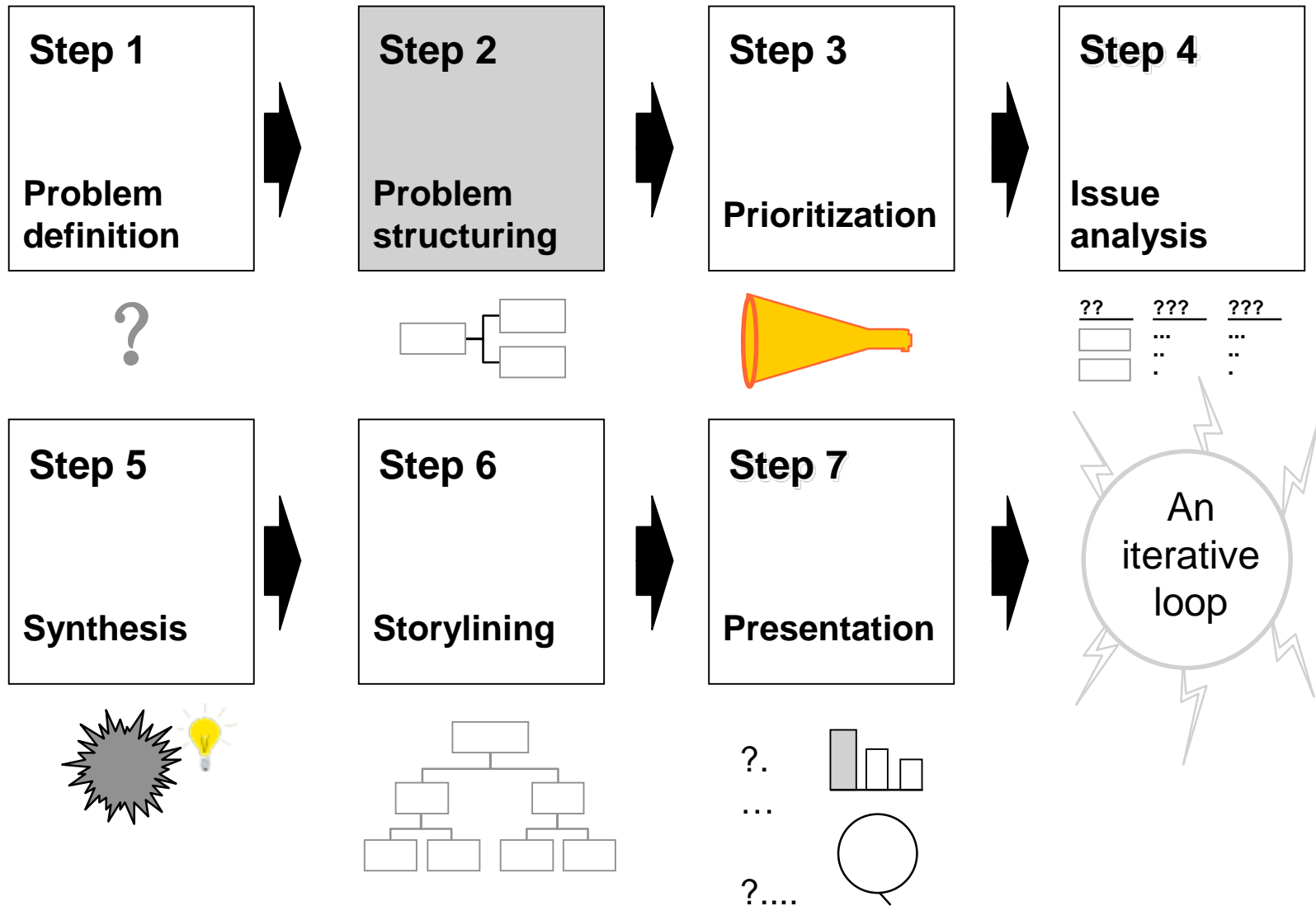
6. Scope of solution space

Focus on SMB notebook, using Winery & Nirvana as real life example
Include retail channel as an option (not yet offered on Vostro)

EXERCISE: PROBLEM DEFINITION

-
- Identify a real life Dell problem that your team can solve using the 7-step process
 - Complete a problem statement worksheet for your problem
 - Team breakout discussion for 20 minutes
-

7-STEP PROBLEM SOLVING LOOP



PUZZLE 1



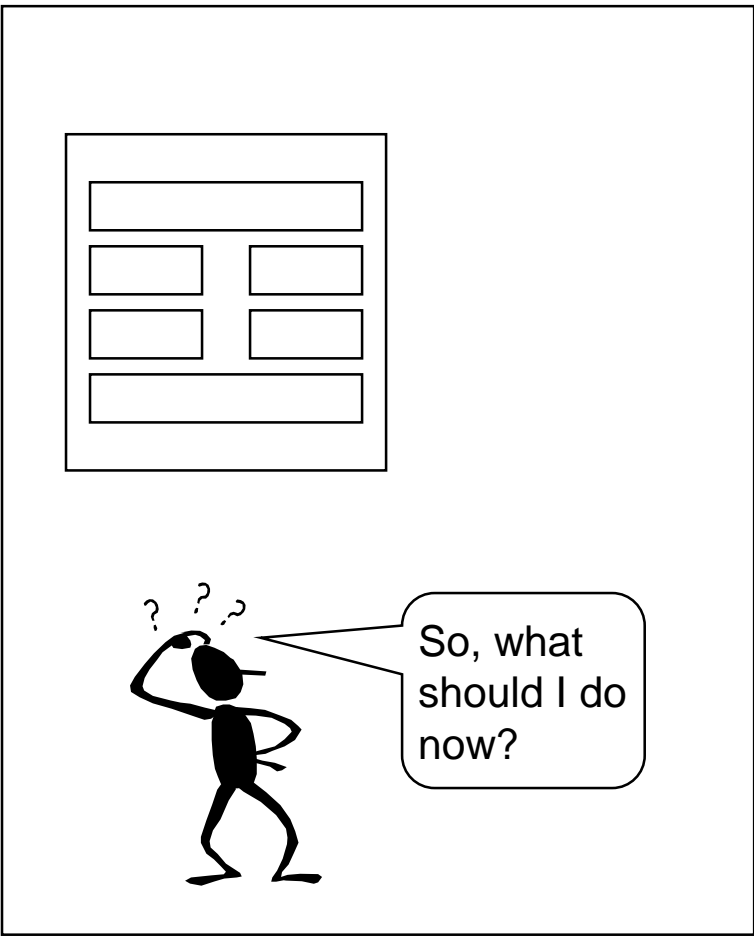
Three men in a cafe order a meal the total cost of which is \$15. They each contribute \$5. The waiter takes the money to the chef who recognizes the three as friends and asks the waiter to return \$5 to the men.

The waiter is not only poor at mathematics but dishonest and instead of going to the trouble of splitting the \$5 between the three he simply gives them \$1 each and pockets the remaining \$2 for himself.

Now, each of the men effectively paid \$4, the total paid is therefore \$12. Add the \$2 in the waiters pocket and this comes to \$14.....where has the other \$1 gone from the original \$15?

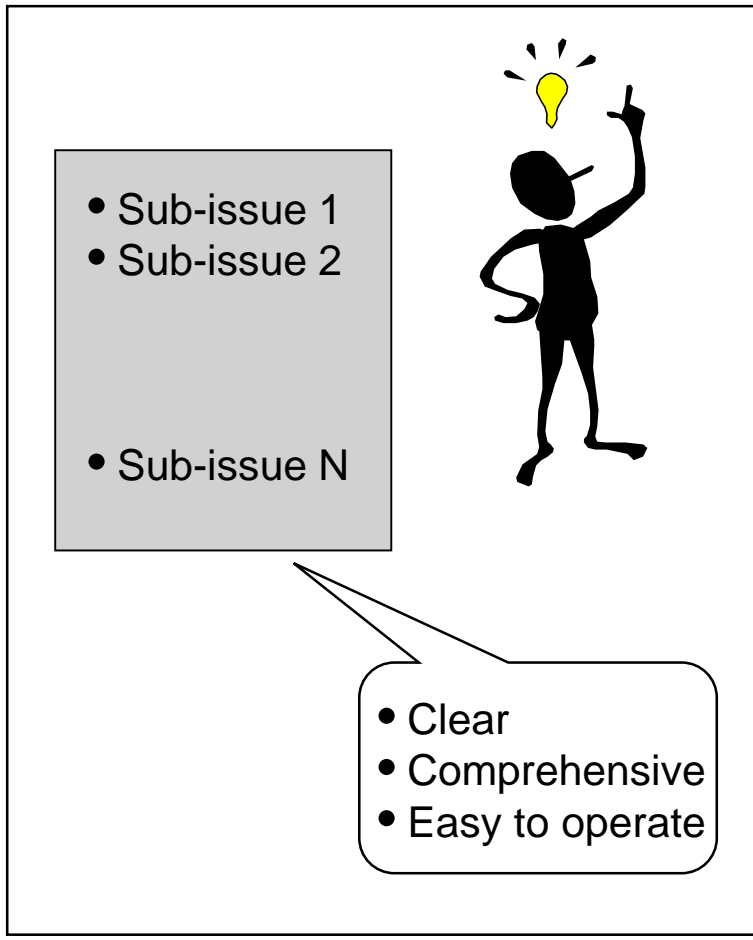
STEP 2: PURPOSE OF LOGIC TREES

From a roughly defined complex issue . . .

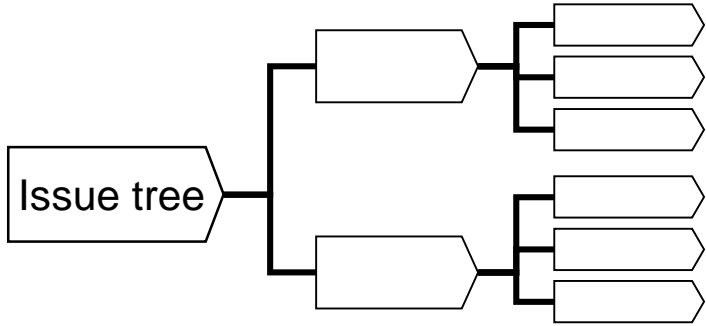
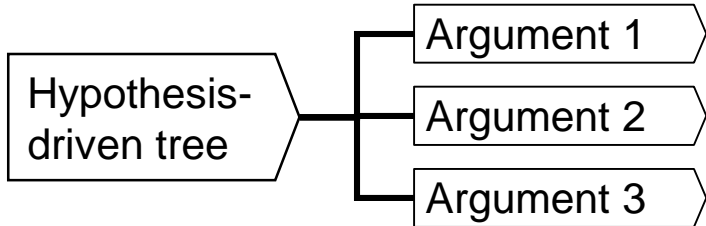


Logic Tree

. . . to a series of sub-issues linked intrinsically

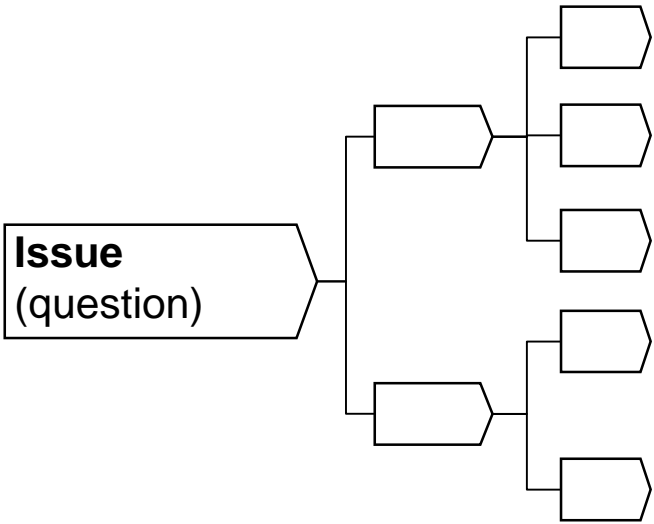


TYPES OF LOGIC TREES

Type	Description	Objective
	<ul style="list-style-type: none">• Disaggregate a problem into a set of issues that are logically linked	<ul style="list-style-type: none">• To disaggregate a problem into a set of individually manageable issues
	<ul style="list-style-type: none">• Establish a hypothesis first, then prove or negate the hypothesis with sufficient arguments	<ul style="list-style-type: none">• To focus on potential solutions early on to facilitate problem-solving

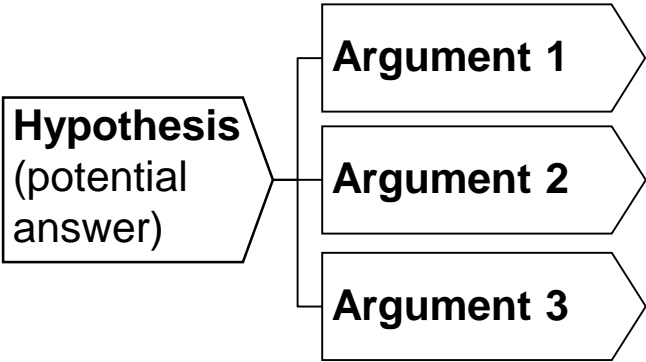
EACH TREE USES DIFFERENT METHODS TO DRIVE DOWN TO BRANCHES

Issue tree



“What?” or “How?”

Hypothesis-driven tree



“Why?”

THE USE OF ISSUE VS. HYPOTHESIS TREES DEPENDS ON SEVERAL FACTORS

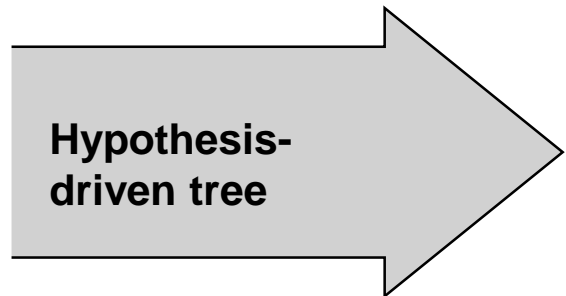


Issue tree

- Provides a reliable approach; may be slow but credible
- Applicable when understanding of the problem is limited
- Conveniently disaggregates a problem into pieces
- Addresses the entire solution space

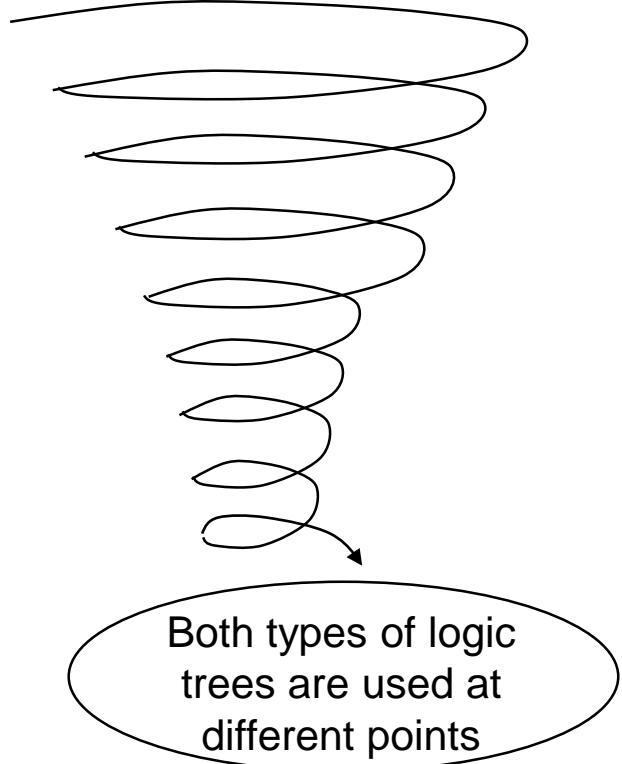
Two approaches

- Disaggregate a problem into a set of sub-issues
- Help identify fundamentals
- Create a “problem structure” for the team



Hypothesis-driven tree

- Provides an effective approach and more efficient than issue trees
- Applicable when an established view is already in place
- Requires more deliberation to disaggregate a problem
- Addresses hypothesis-relevant elements in a solution



Both types of logic trees are used at different points

MAKE SURE YOUR ISSUE TREE IS “MECE”

M

Mutually

E

Exclusive

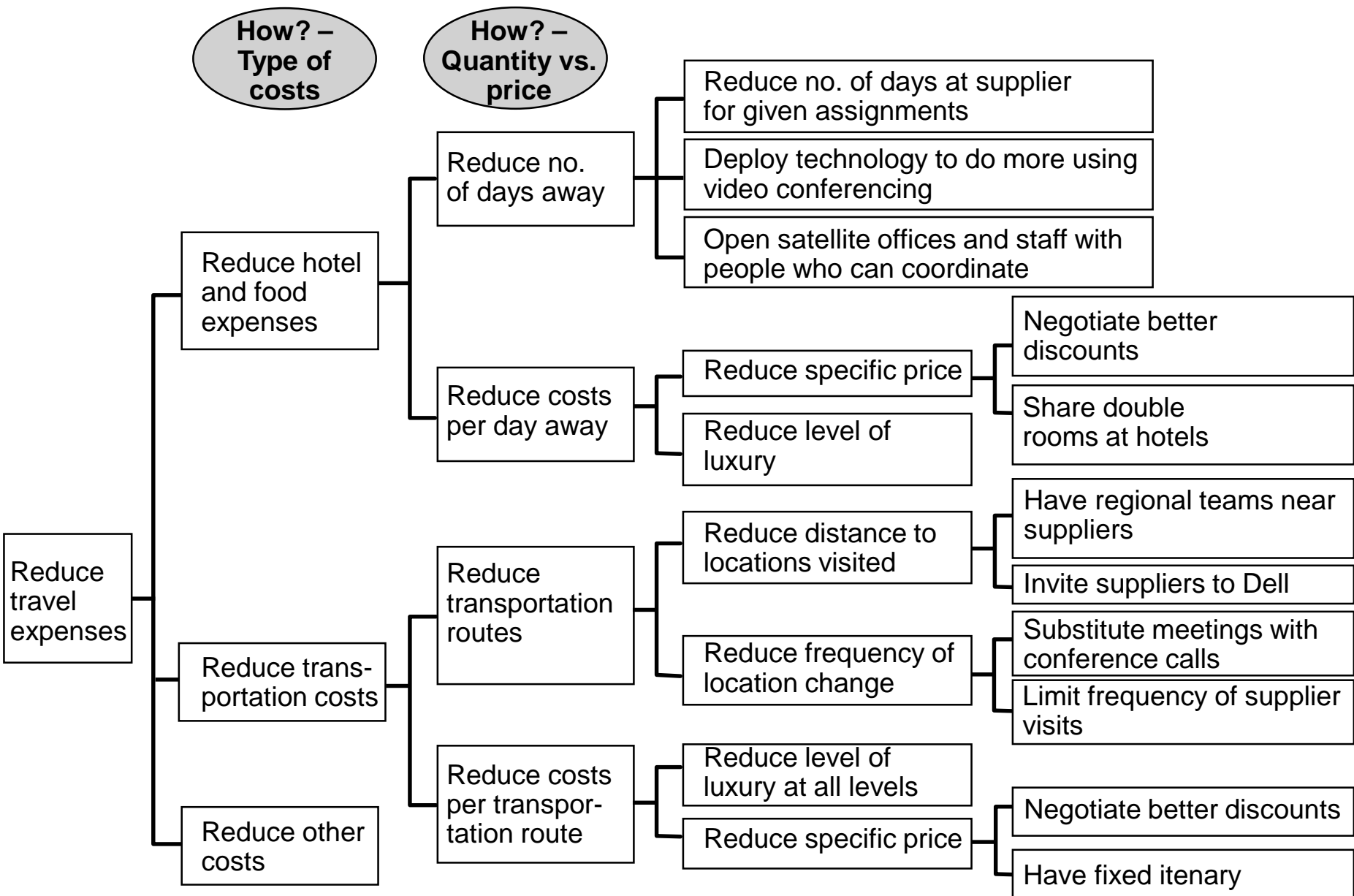
C

Collectively

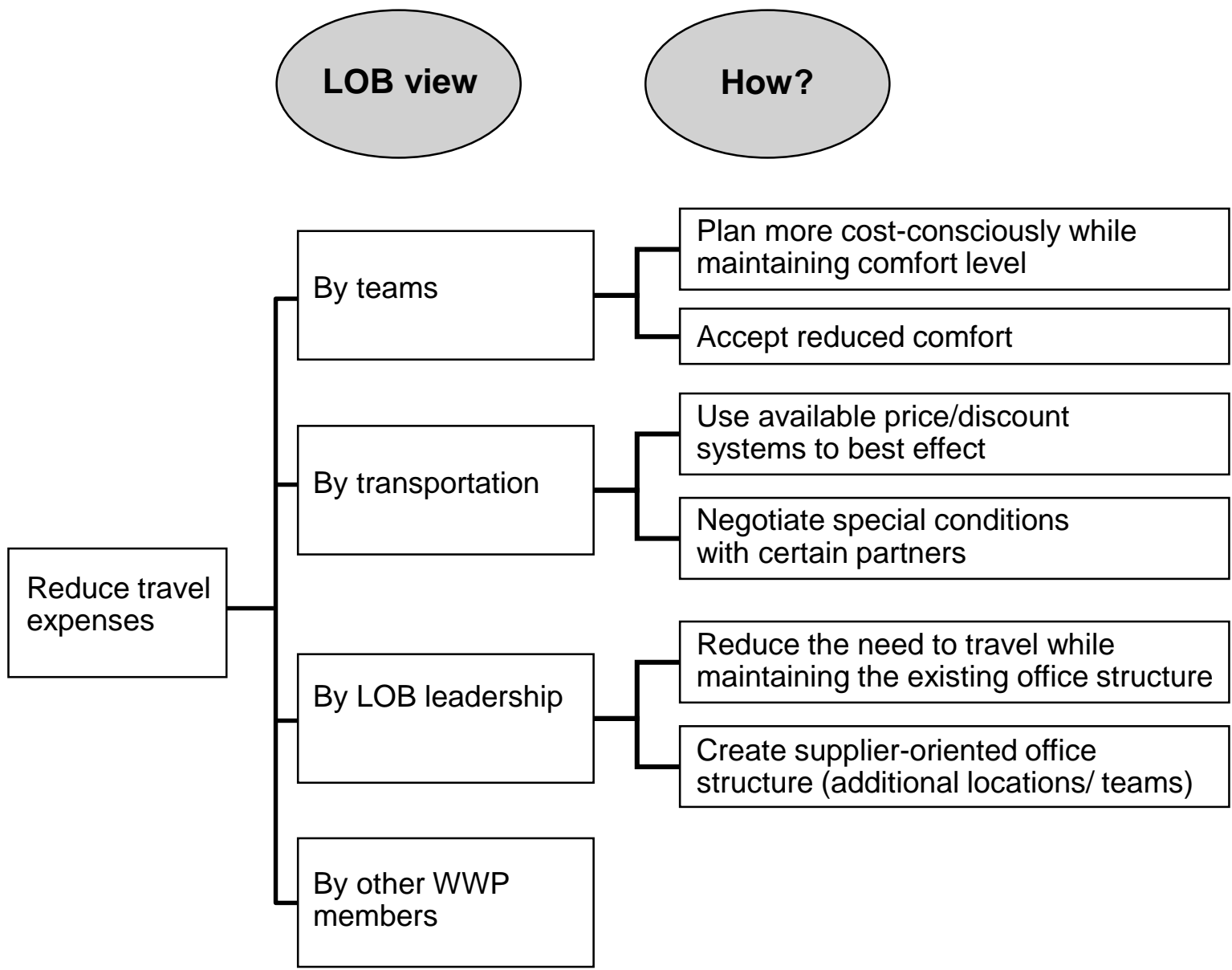
E

Exhaustive

ISSUE TREE EXAMPLE 1 – REDUCING TRAVEL EXPENSES



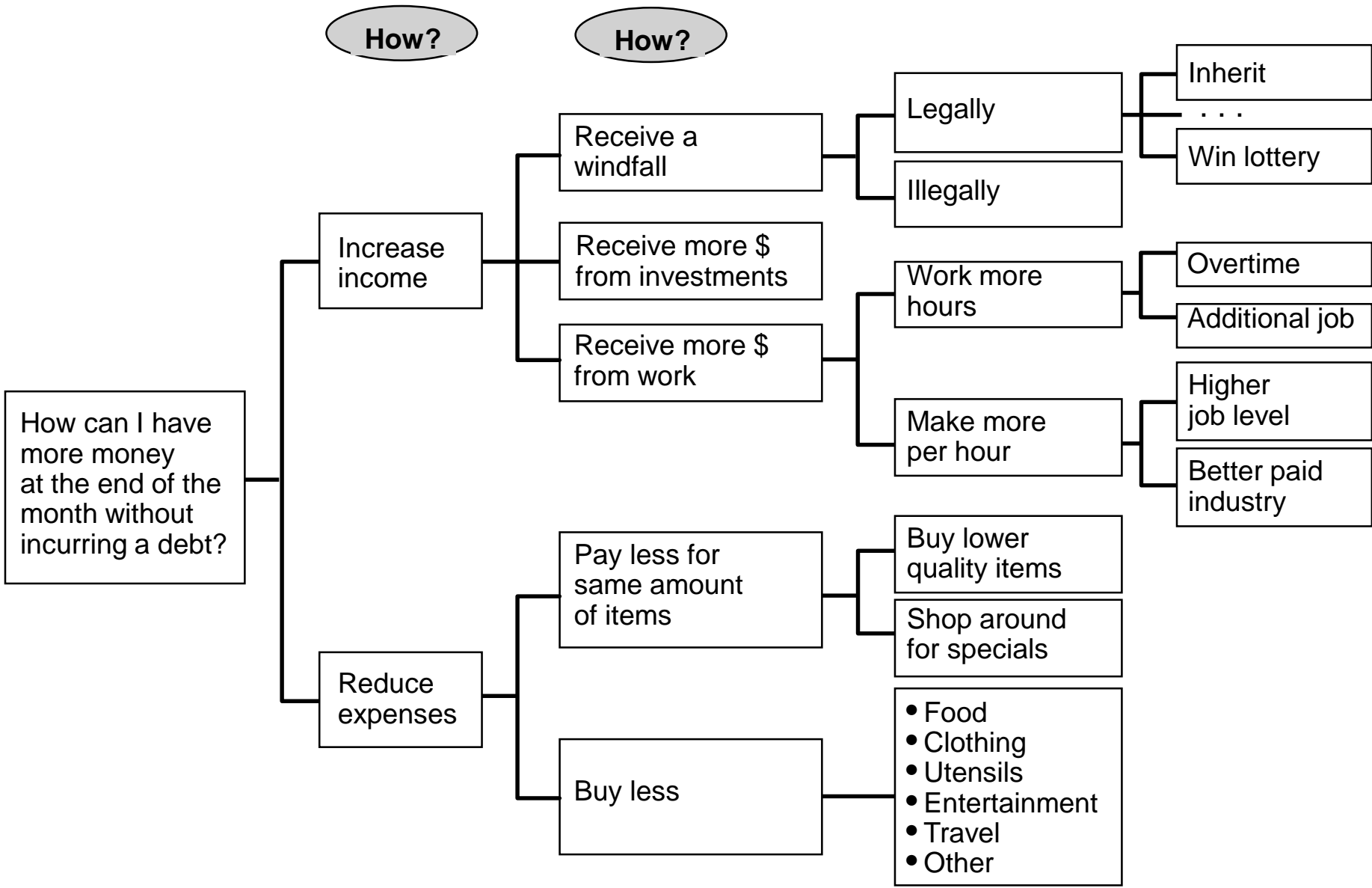
ISSUE TREE EXAMPLE 2 – ANOTHER WAY OF LOOKING AT THE SAME KEY ISSUE



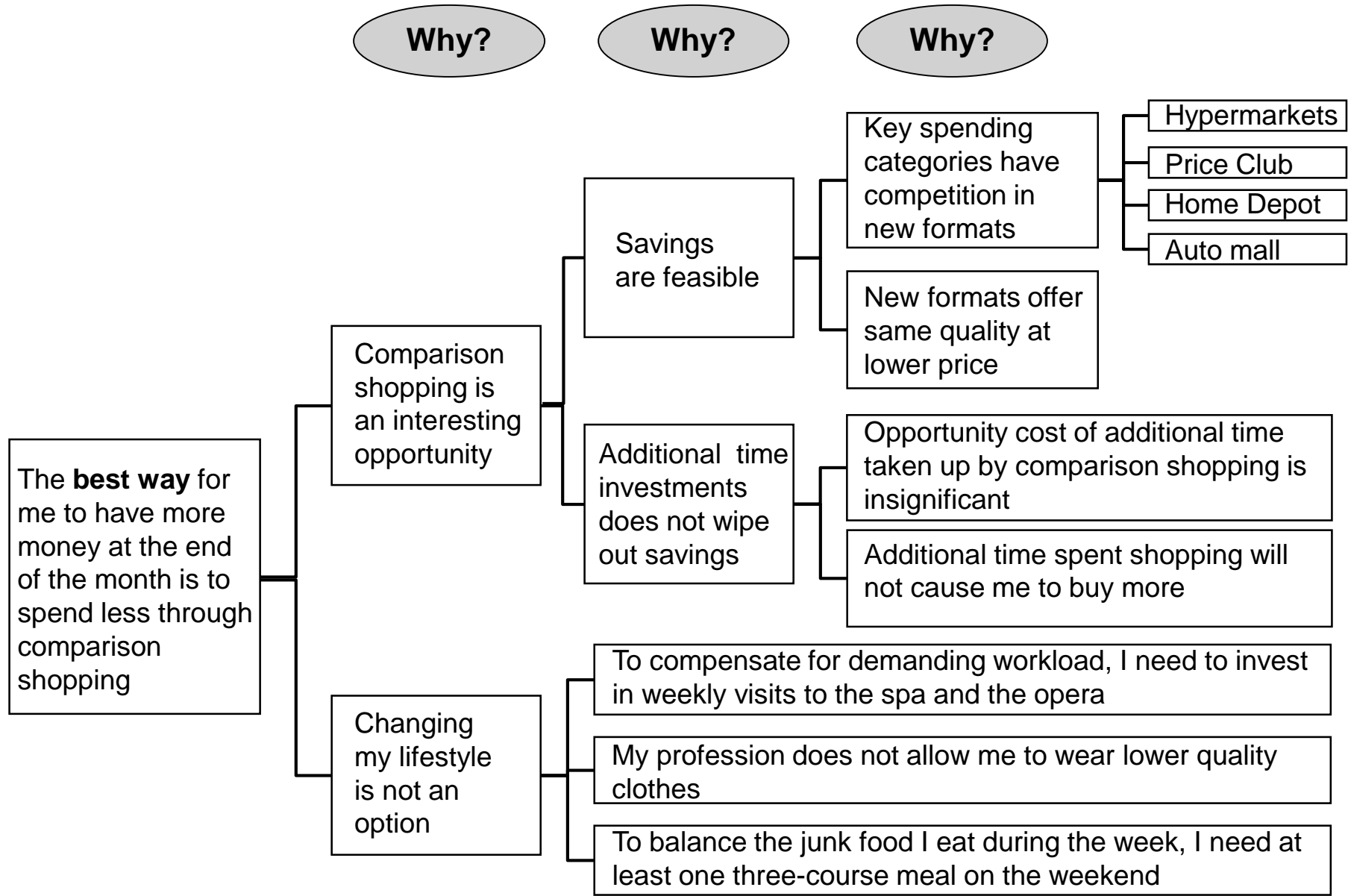
EXERCISE: HOW TO SAVE MONEY

- Take the small cards and arrange into an issue tree
 - Team breakout discussion for 10 minutes
-

ISSUE TREE EXAMPLE 3 – SAVING MONEY ANSWERS



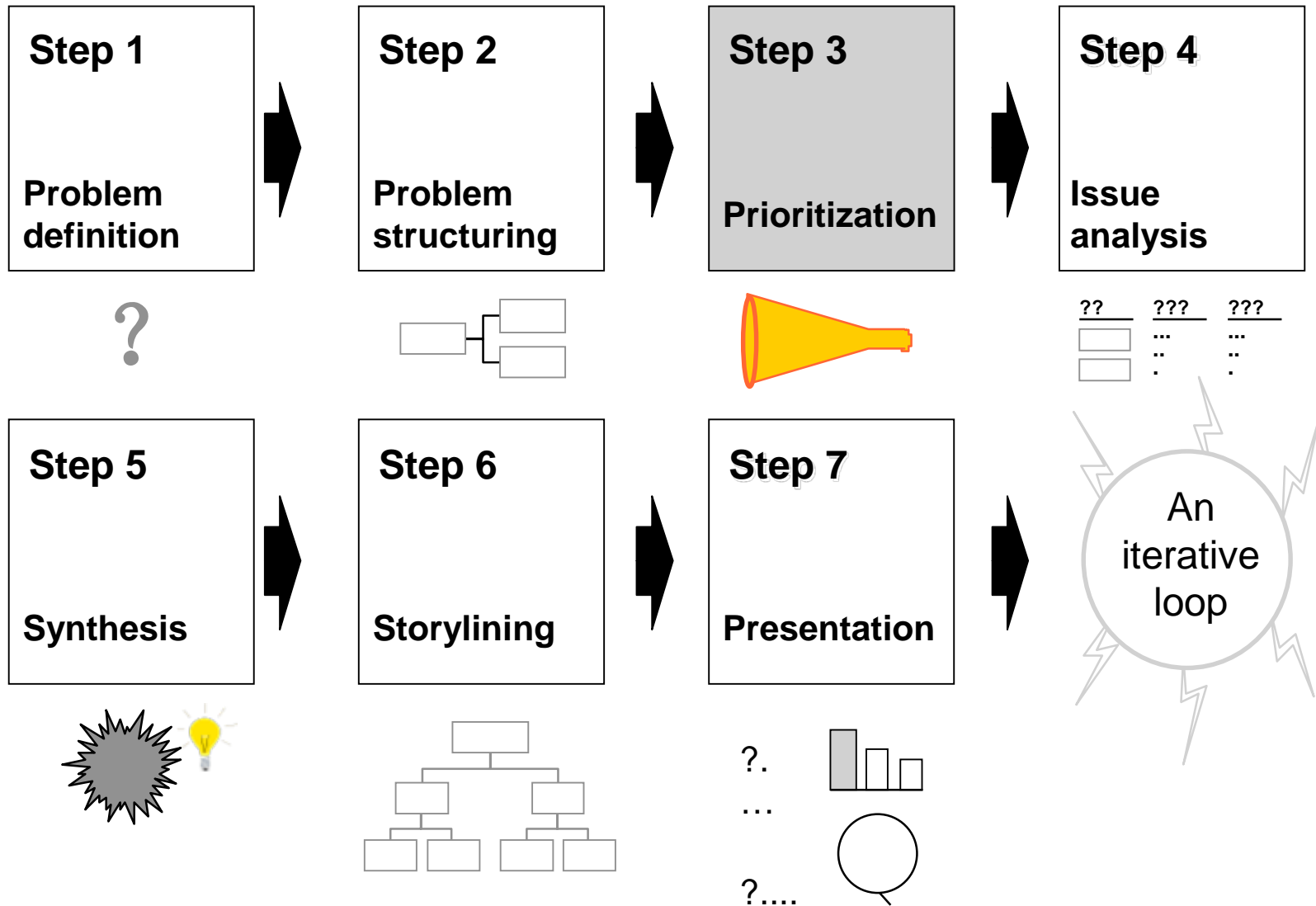
HYPOTHESIS-DRIVEN TREE -- SAVING MONEY



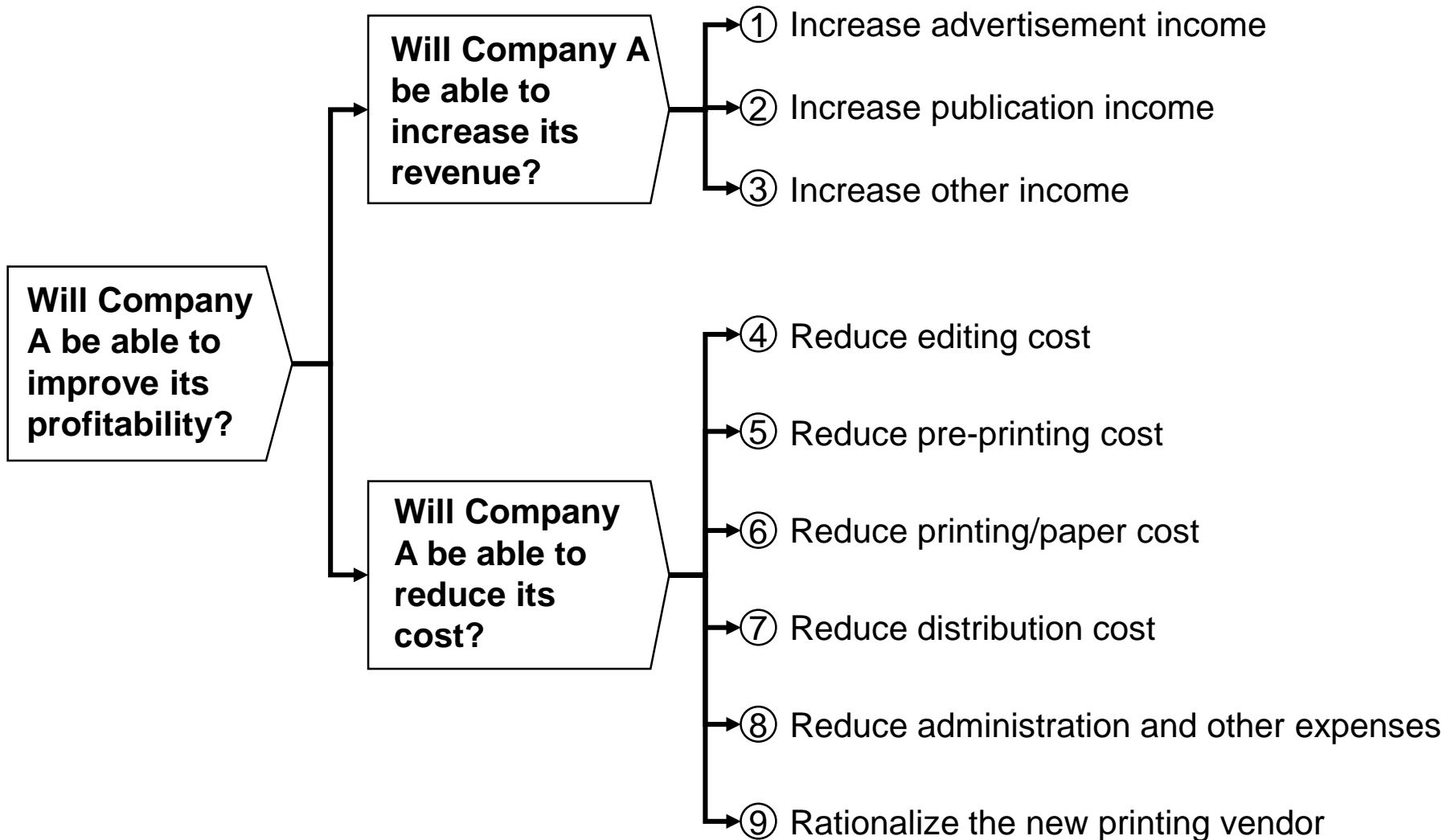
EXERCISE: PROBLEM STRUCTURING

- Develop an issue tree for your problem to structure it and drive towards an exhaustive list of potential solutions
 - Team breakout discussion for 20 minutes
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7-STEP PROBLEM SOLVING LOOP

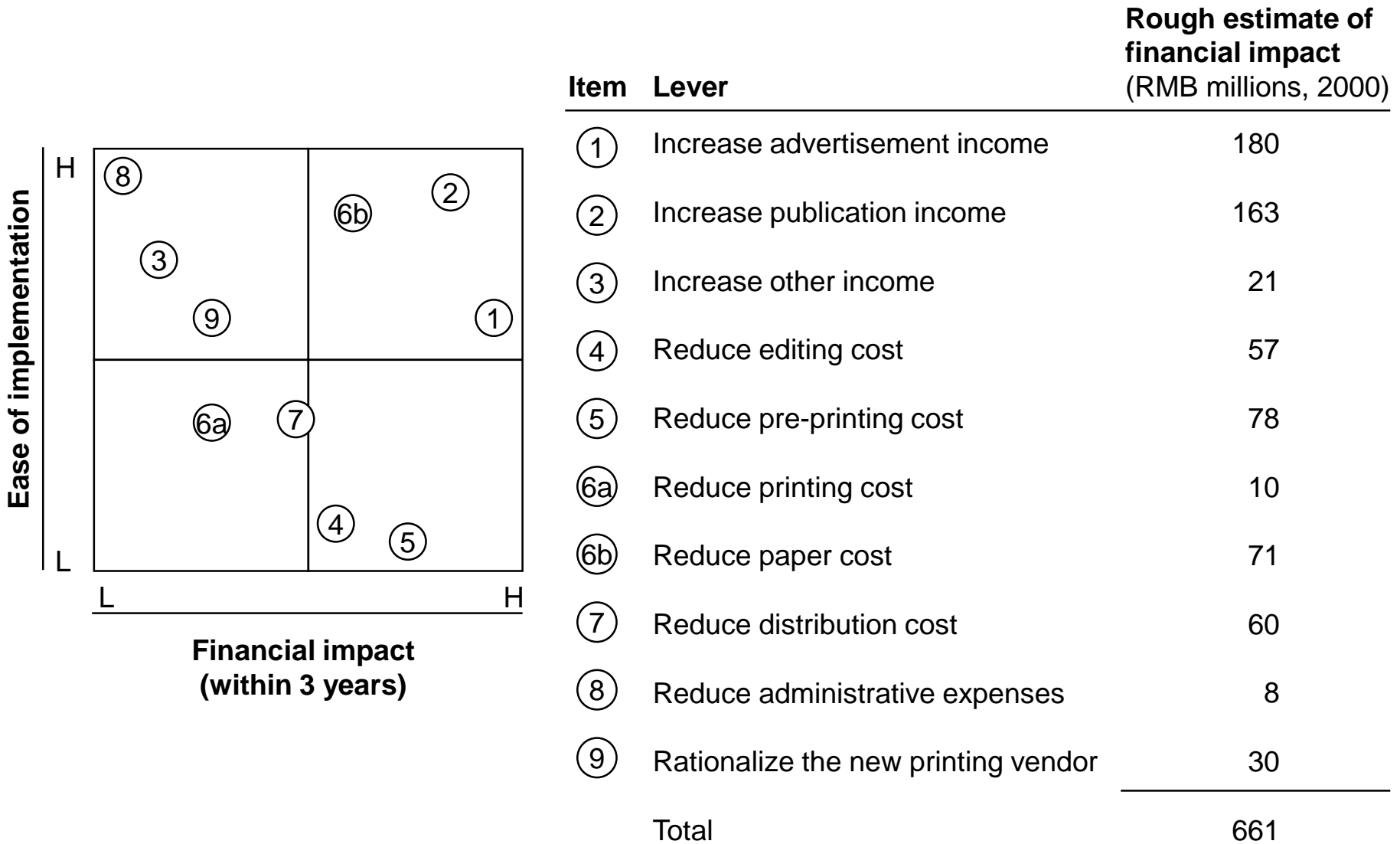


FINANCIAL IMPACT OF IMPROVEMENT LEVERS




SOLUTION – OPPORTUNITIES TO IMPROVE PROFITABILITY OF COMPANY A

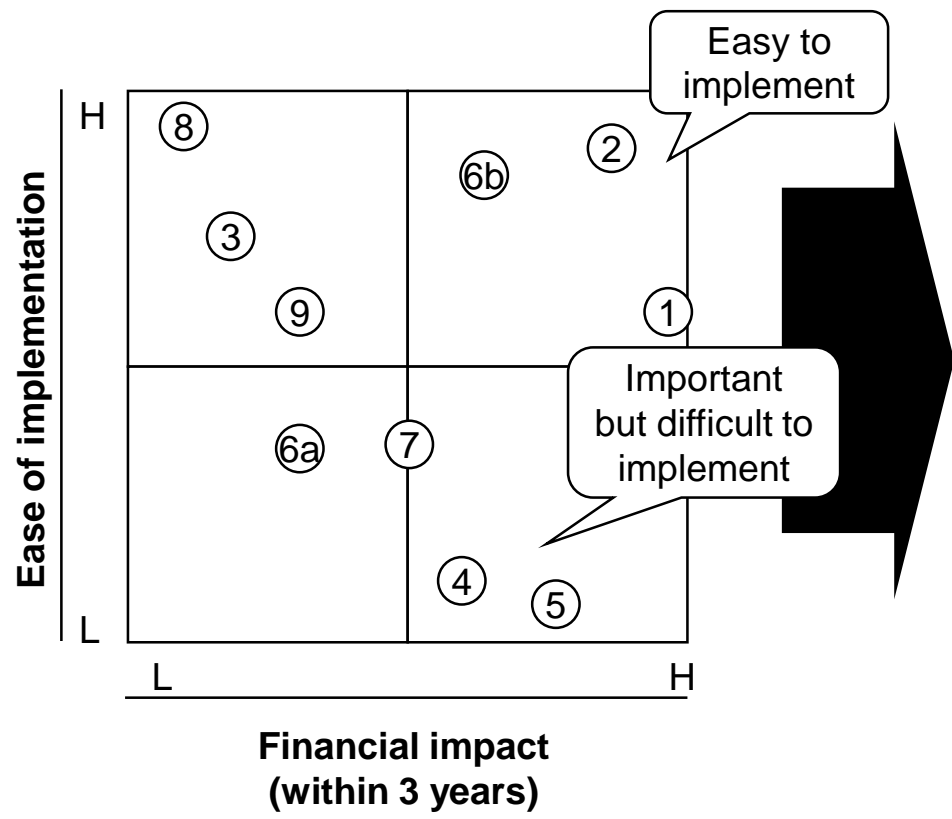
EXAMPLE



SOLUTION – PRIORITIZATION

EXAMPLE

 Focus of future

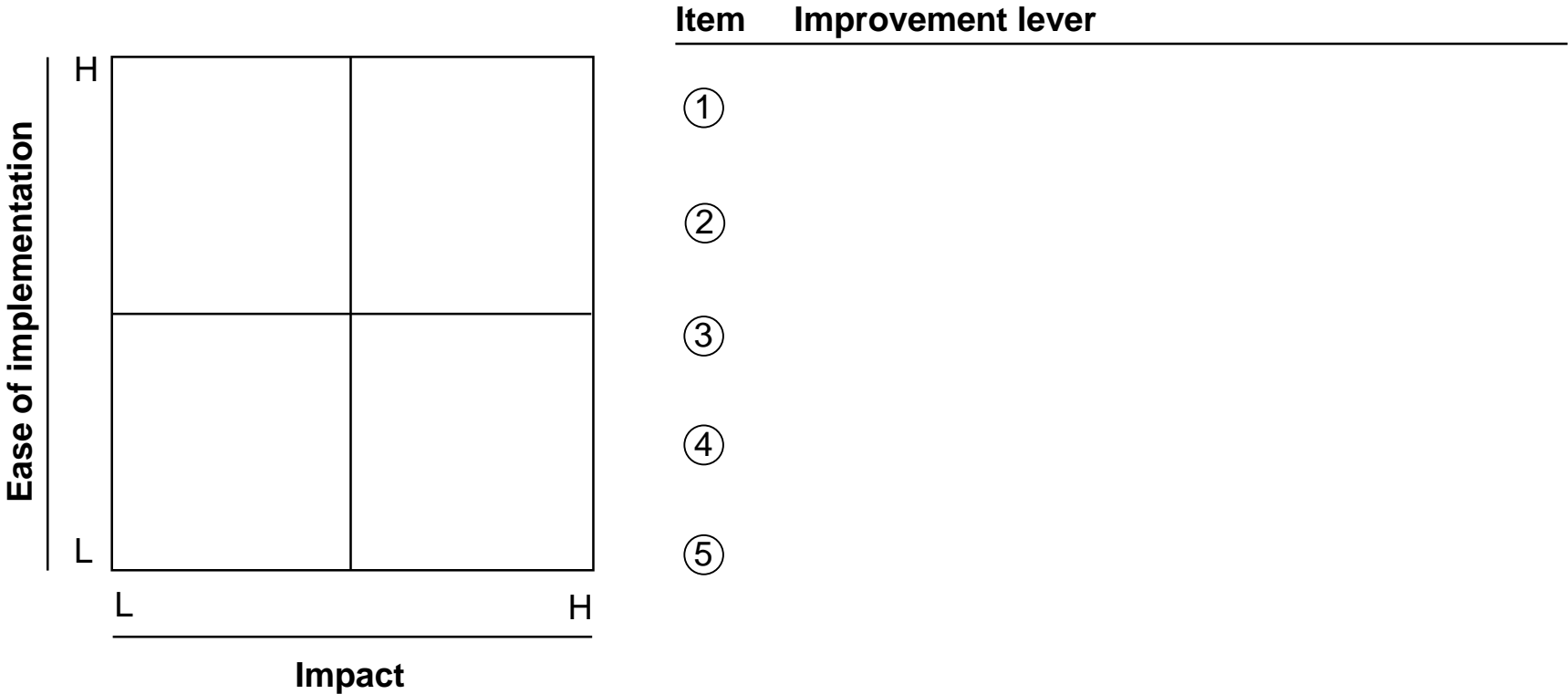


Prioritization

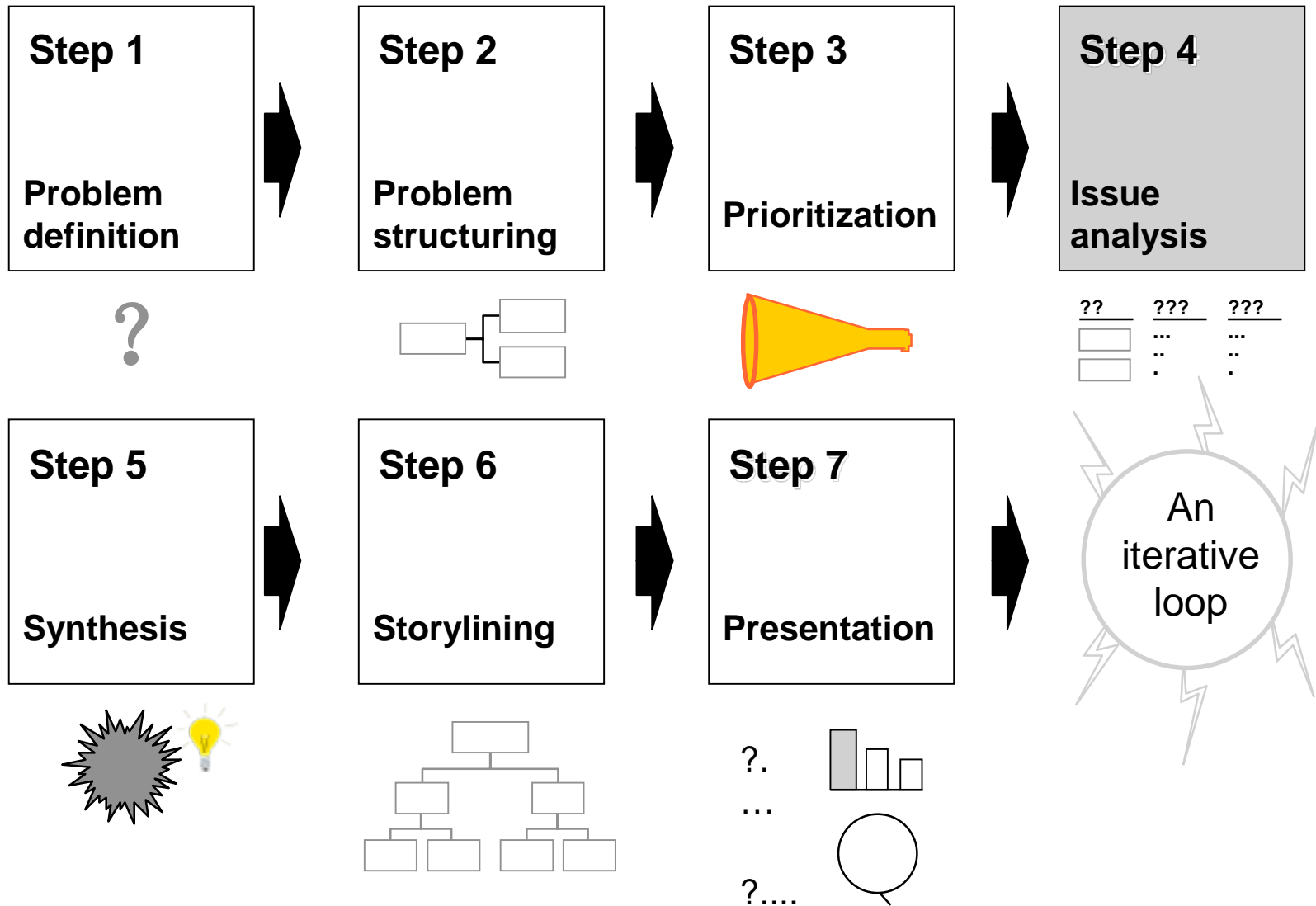
- ② Increase publication income
 - ① Increase advertisement income
 - ⑥b Reduce paper cost
 - ⑤ Reduce pre-printing cost
 - ④ Reduce editing cost
 - ⑦ Reduce distribution cost
 - ⑧ Reduce administrative and other expenses
 - ③ Increase other income
 - ⑨ Rationalize the new printing vendor
 - ⑥a Reduce printing cost
- Priority**
- Second priority**

TEAM EXERCISE: PRIORITIZATION

- Prioritize the levers from your issue tree and map onto the 2x2 table based on ease of implementation vs. impact
- Time: 15 min

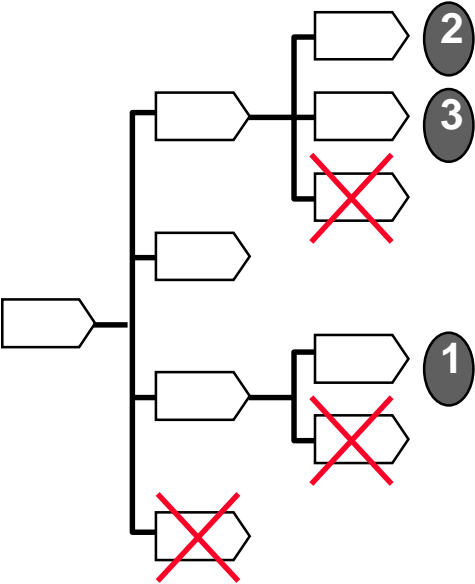


7-STEP PROBLEM SOLVING LOOP



ISSUE ANALYSIS SETS THE STAGE FOR ACTION

Logic tree after prioritization of issues



Analyses

TO DOs

Mon	Tue	Wed	Thu	Fri



FROM ISSUE ANALYSIS TO WORKPLAN

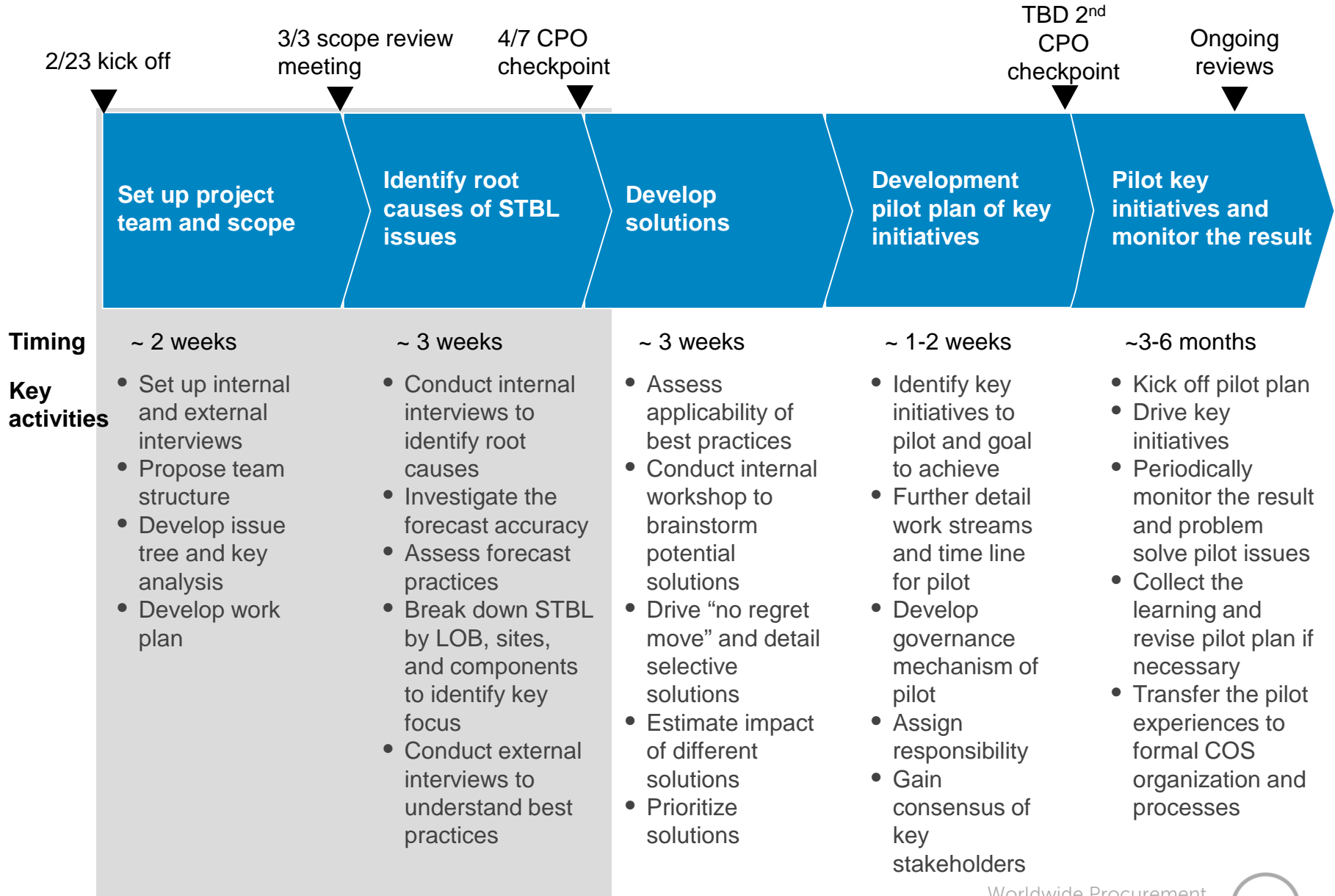
Proposed solution	Information/analysis required	Source/Provider	Responsibility	Timing

WORKPLAN EXAMPLE

			July														Aug																				
			Week 3							Week 4							Week 5							Week 6							Week 7						
			Responsit	Location	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
"VORPLAN"																																					
TEAM MEETINGS																																					
Weekly update							♦							♦							♦							♦							♦		
Steering committee meeting							♦														♦																
Adv manufacturing meeting - non-transformer							♦							♦							♦							♦						♦			
Adv manufacturing meeting - transformer							♦								♦							♦							♦						♦		
Transfer file meeting																																					
Weekly market update																																					
DATA/SAMPLE COLLECTION																																					
Transfer file																																					
Technical data			Jim																																		
Purchasing data			Jim																																		
Quality data			Jim																																		
Industrial data			Jim																																		
Logistics data			Jim																																		
Tooling preparation																																					
tbd1			Jim																																		
tbd2			Jim																																		
Sample collection																																					
sample request			Brad																																		
receive sample			Brad																																		
Supplier background filing approach			each subteam																																		
SUPPLY MARKET ANALYSIS																																					
Hypothesis on sourcing strategy and process			each subteam																																		
Economics/insights of supply base			each subteam																																		
SUPPLIER IDENTIFICATION																																					
Develop supplier database with expansive list of potential			each subteam																																		
Develop short list of suppliers through college phone interview			each subteam																																		
Fine (second) filter screening criteria			each subteam																																		
Second phone interview			each subteam																																		
Send RFI			each subteam																																		
Follow up on RFI			each subteam																																		
Screening/decision on RFI			each subteam																																		
SUPPLIER VISIT TO PRE-QUALIFIED LIST																																					
Schedule visits			each subteam																																		
conduct visit to each new supplier on "Short List" and SAM			each subteam																																		
Pre-qualified List' generated after evaluation of SAM			each subteam																																		

WORKPLAN EXAMPLE

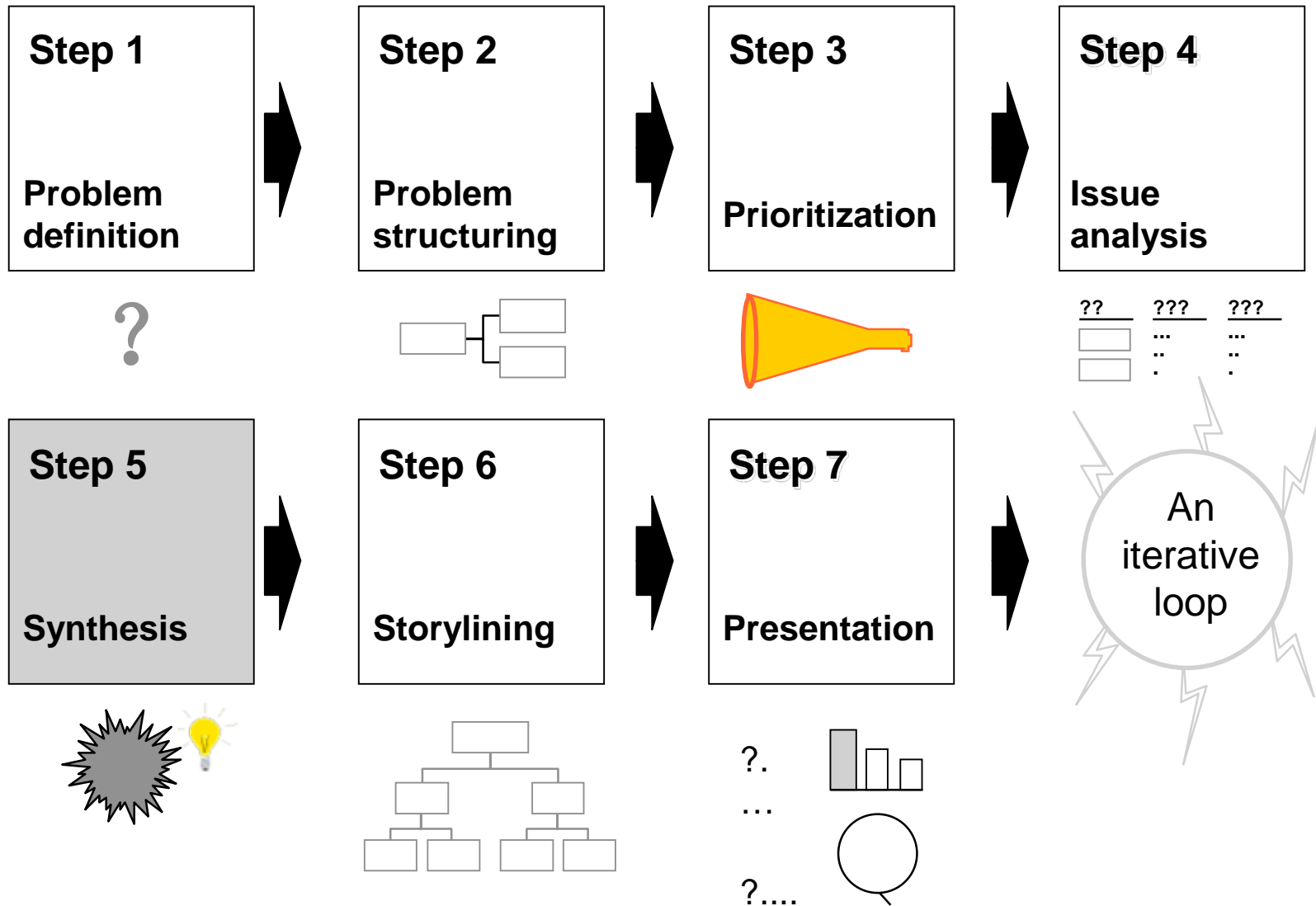
Current progress



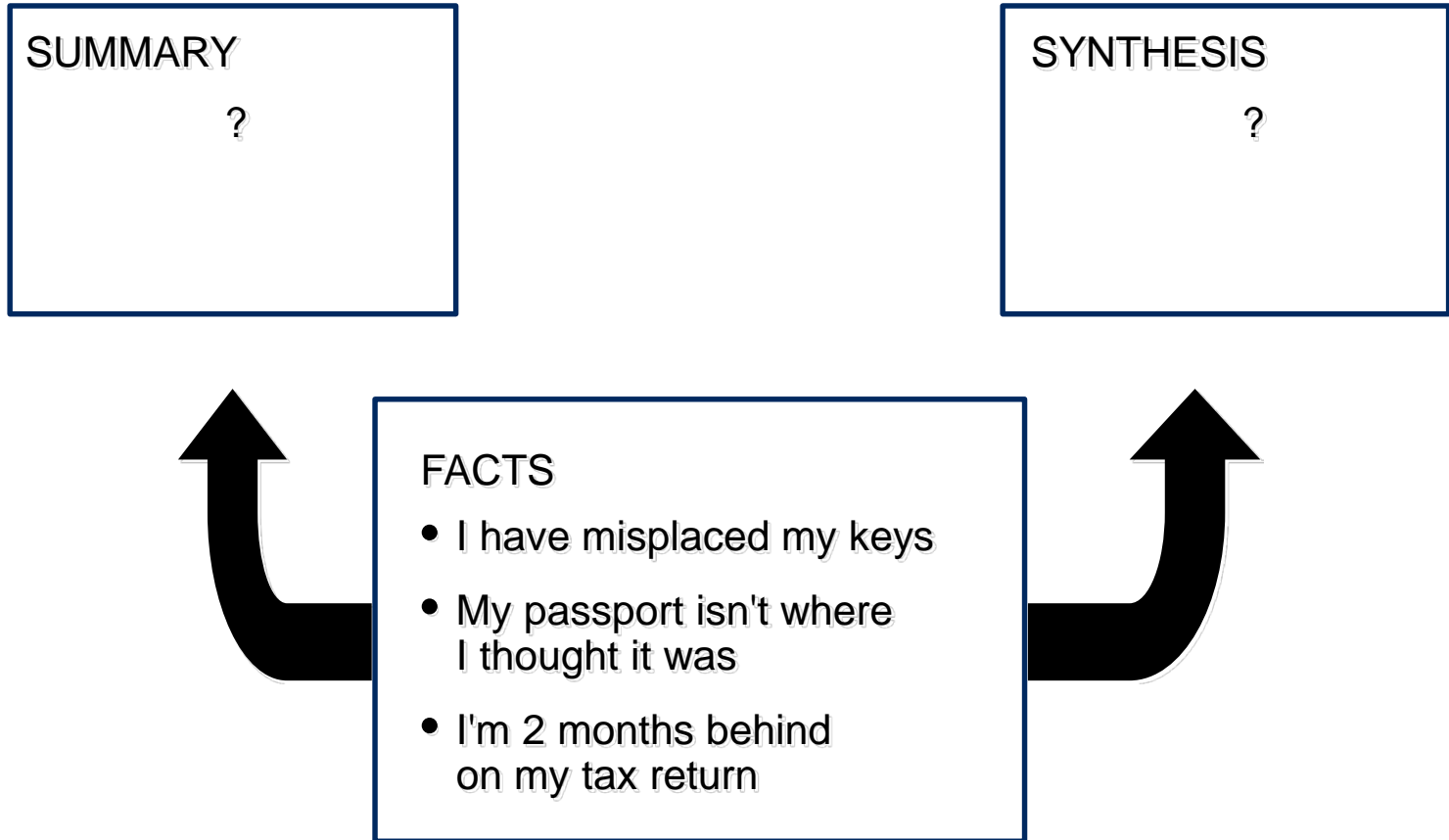
EXERCISE: ANALYSIS

- Choose one of your better ideas (based on your prioritization), and develop a workplan to validate the prioritization
 - Team breakout discussion for 20 minutes
-

7-STEP PROBLEM SOLVING LOOP



Step 5: FACTS CAN BE SUMMARIZED OR SYNTHESIZED...



SUMMARY IS A MERE LINKAGE OF FACTS WHILE SYNTHESIS IS THE IMPLICATION OR ROOT CAUSE

SUMMARY

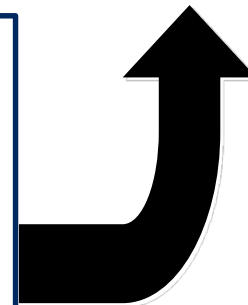
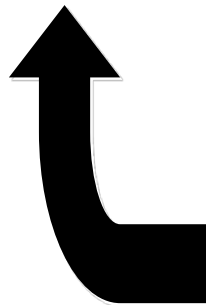
I've lost my keys and passport and I'm behind on my tax return

SYNTHESIS

I've been sloppy

FACTS

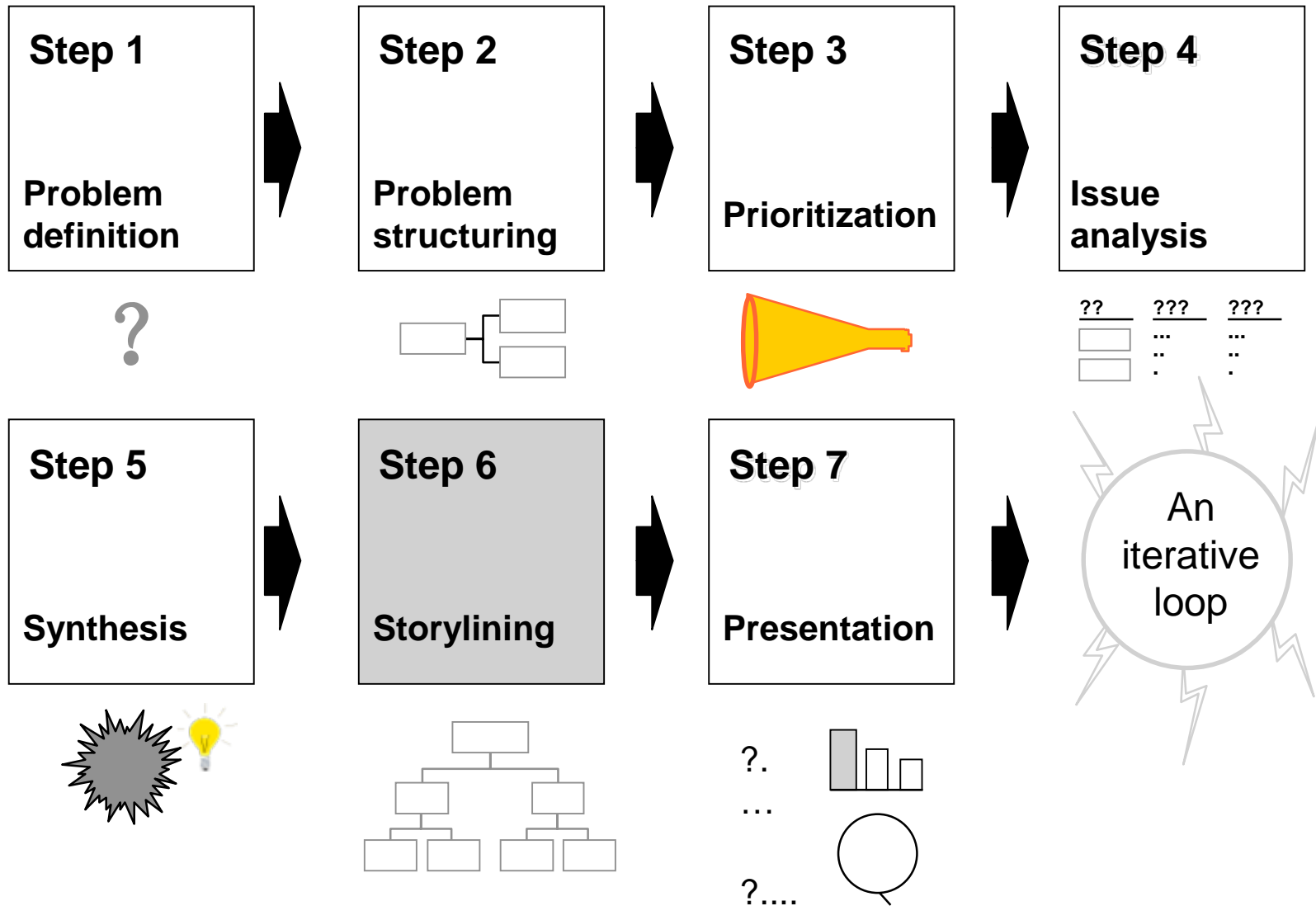
- I have misplaced my keys
- My passport isn't where I thought it was
- I'm 2 months behind on my tax return



EXERCISE: SYNTHESIS

- Choose one activity from your analysis workplan and develop a dummy slide of results
 - Synthesize the results to form the slide's message
 - Team breakout discussion for 20 minutes
-

7-STEP PROBLEM SOLVING LOOP



STORY LINING AGENDA

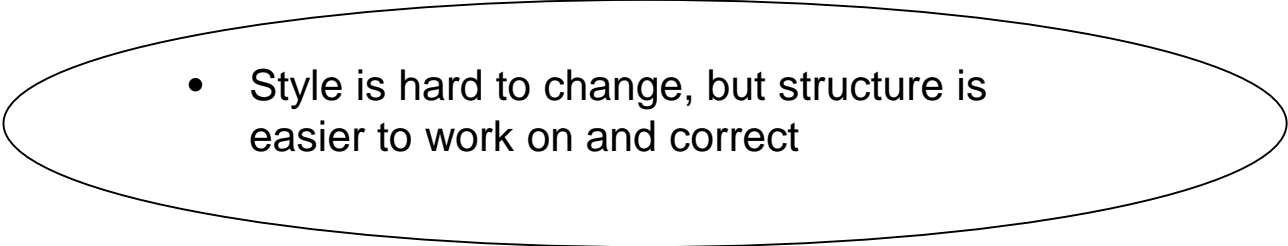
Introduction to pyramid structure

Structures within the pyramid

How everything comes together

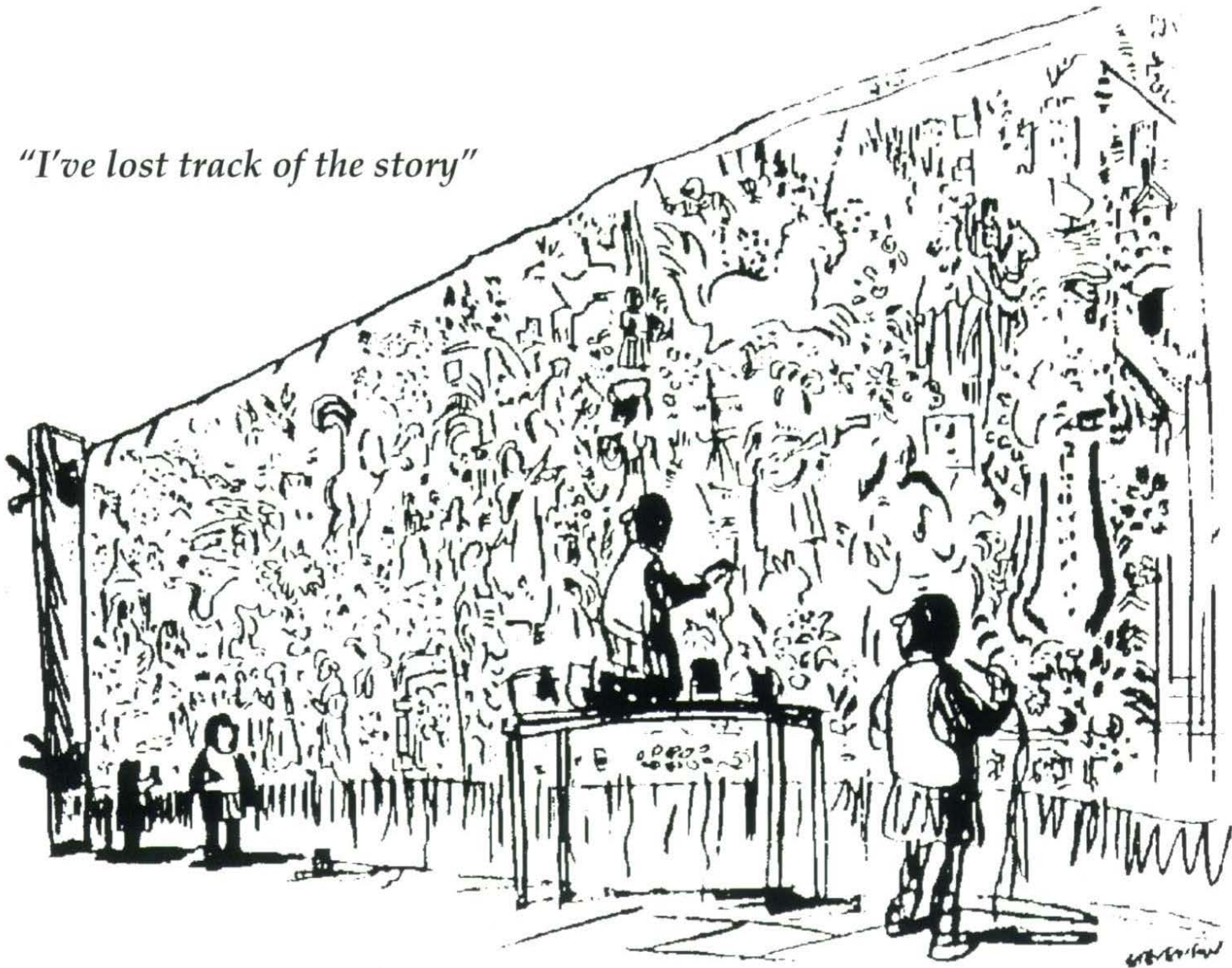
WE ALL FACE COMMON PROBLEMS IN WRITTEN AND VERBAL COMMUNICATION

- Have you ever come across documents that took a long time to read and find out the key points?
- Have you ever listened to a speech and is unclear the main points of what he/she is trying to say?
- Have you had to swim through pages and pages of data but with no conclusions or so-what from the data?
- Ever try to comprehend an organization chart from the bottom up?

- 
- Style is hard to change, but structure is easier to work on and correct

FOLLOWING THE PYRAMID PRINCIPLE WILL ENSURE THIS DOES NOT HAPPEN TO YOU

"I've lost track of the story"



THE MIND WORKS BY SORTING INFORMATION INTO GROUPS IN ORDER TO COMPREHEND IT

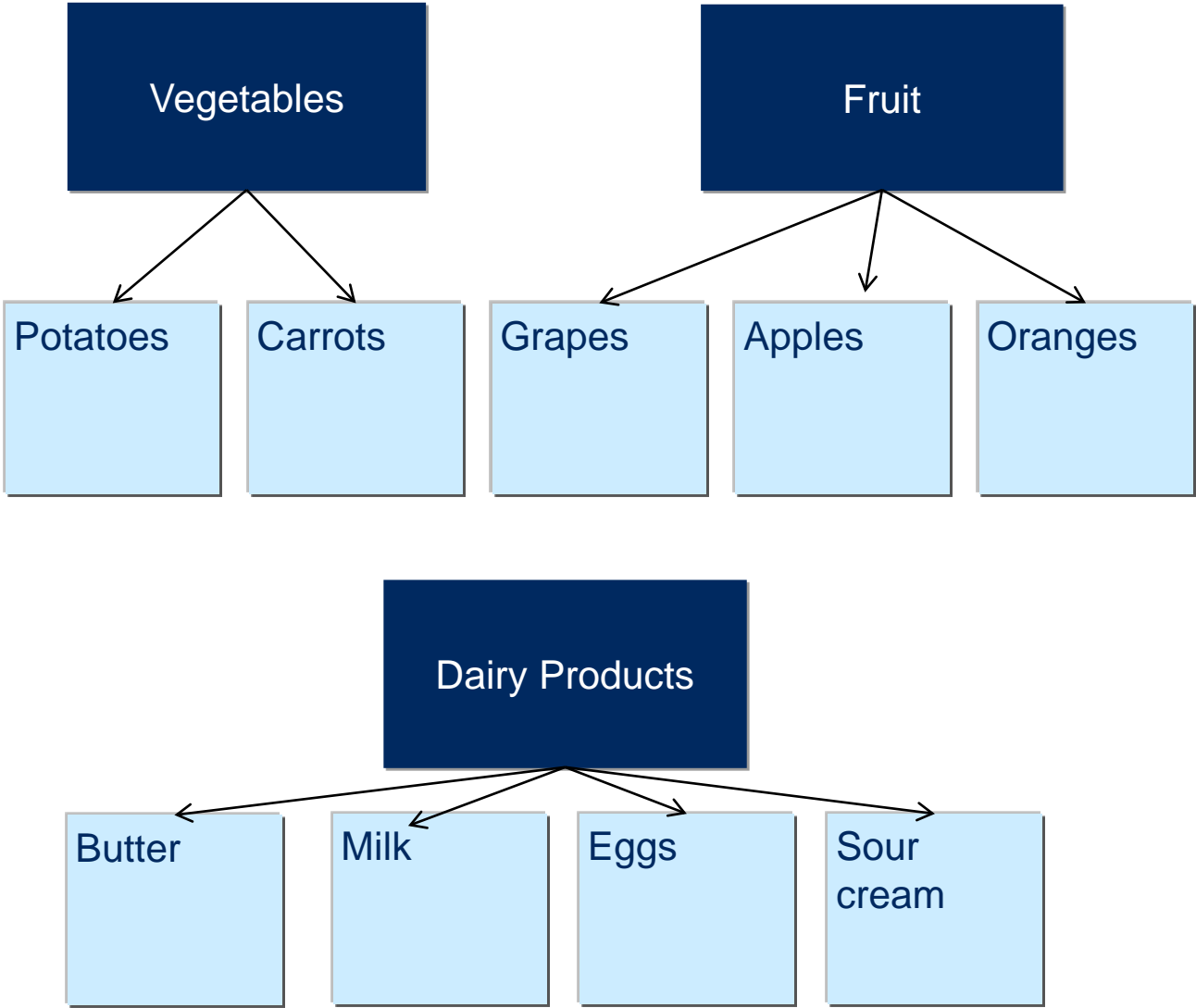
- **Magic number 7:** The mind cannot hold more than 7 items. Ideally is three, but most can take up to five

Example: Shopping for groceries.

How would you categorize these to help you remember?

- Grapes
- Milk
- Potatoes
- Eggs
- Carrots
- Apples
- Sour cream
- Butter
- Oranges

ANSWER TO GROCERY SHOPPING EXAMPLE



IS THIS GROUPING MUTUALLY EXCLUSIVE?

We should sell our house:

- We need more room
- The house is old and needs expensive, basic repairs
- The kitchen is too small
- The furnace is broken
- Our street has too much traffic

SIMPLY GROUPING IS NOT ENOUGH, WE NEED TO STATE THE LOGIC OF THE RELATIONSHIP

The need to state the logic

- **Reader groups and summarizes ideas** in order to remember them
- **Controlling the sequence of ideas** by summarizing ideas before you give individual ideas. People can only take in one sentence/idea at a time
- **Top down presentation of ideas** in a pyramid structure is the clearest way to present written documents

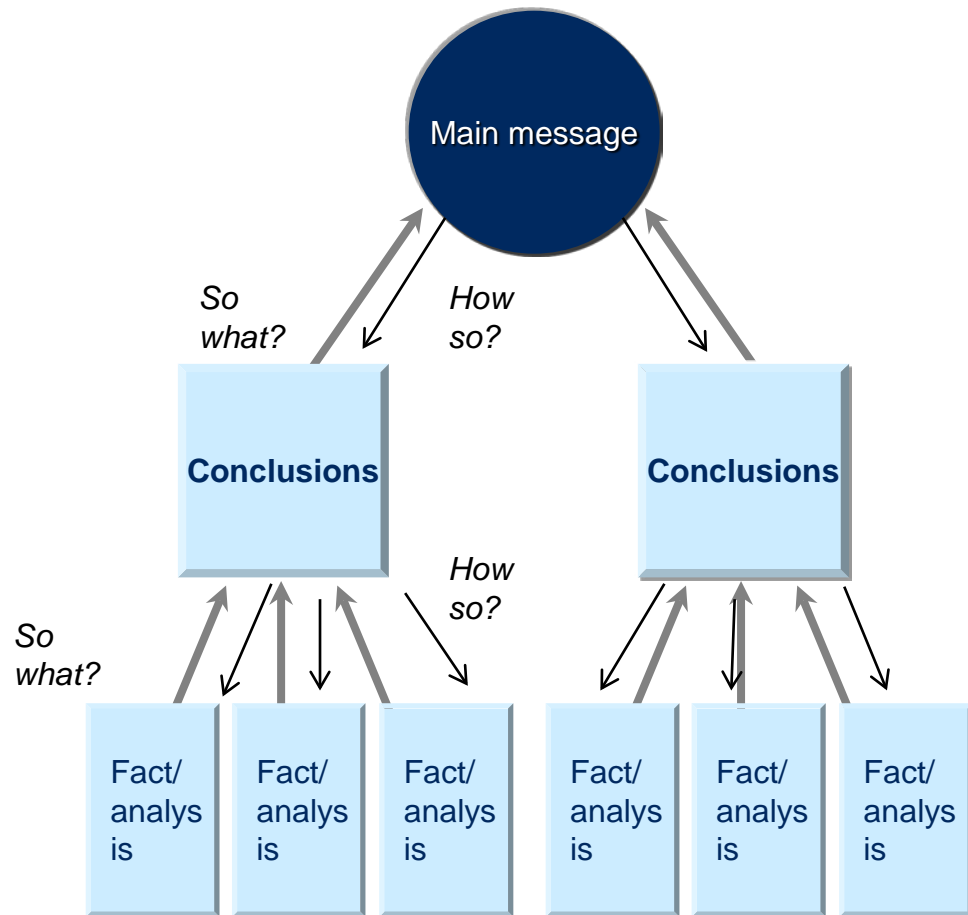
Pyramid structure of grouping ideas

- Present major, more abstract ideas before the minor, supporting ideas is the easiest order for reader to understand
- Ideal structure is a pyramid of groups of ideas tied together by single overall thought.
 - Vertical relation: a point in any level always be a summary of ideas grouped below
 - Horizontal relation: ideas have grouped together because together they present a logical argument

IDEAS IN WRITING SHOULD ALWAYS FORM A PYRAMID UNDER A SINGLE THOUGHT

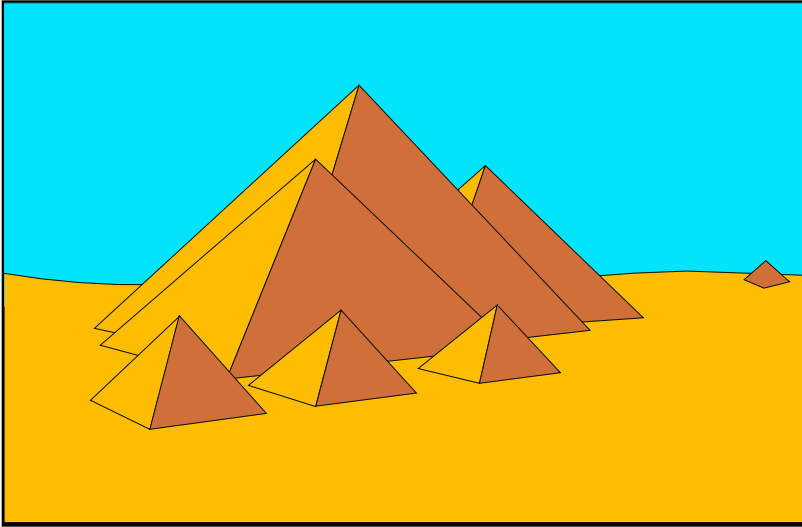
Rules to obey in pyramid structure

- **Rule 1: Ideas at any level must always be summaries of the ideas grouped below them**
- **Rule 2: Ideas in each grouping must be same kind of idea**
 - Grouping must fall into same logical category
 - Shortcut is whether can label ideas into plural nouns (e.g. recommendations, reasons, problems, changes to be made)
- **Rule 3: Ideas in each grouping must always be logically ordered:**
 - Deductive: a line of reasoning that presents a “therefore”
 - Inductive: defines group of ideas then make an inference

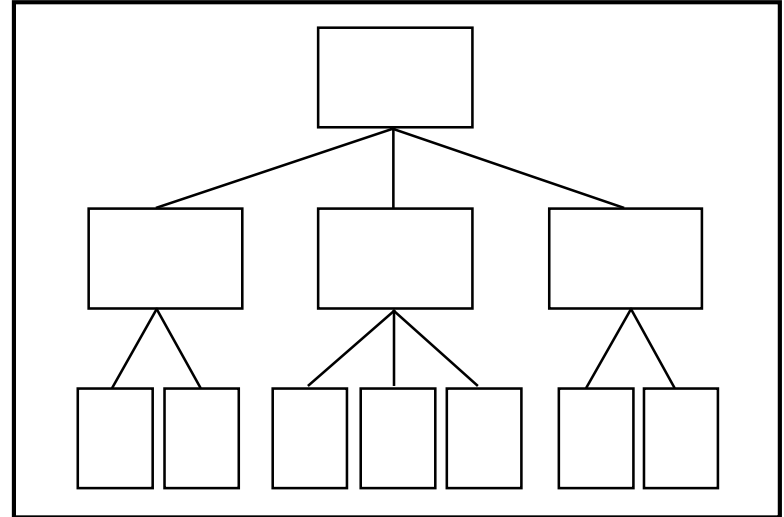


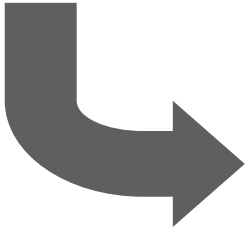
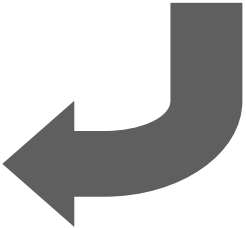
TWO TYPES OF PYRAMIDS SHARE CHARACTERISTICS

Pyramids built of stone . . .



Pyramids built of ideas . . .



- 
- Only one “stone” at the top
 - Every stone supported by at least two other stones
 - Sturdy – not easily thrown over
- 

STORY LINING AGENDA

Introduction to pyramid structure

Structures within the pyramid

How everything comes together

THE PYRAMID DICTATES A SET OF SUBSTRUCTURES - VERTICAL RELATIONSHIP

Pyramid substructures

- A Vertical relationship between points and subpoints**
- B Horizontal relationship within a set of subpoints**
- C Narrative flow of introduction**

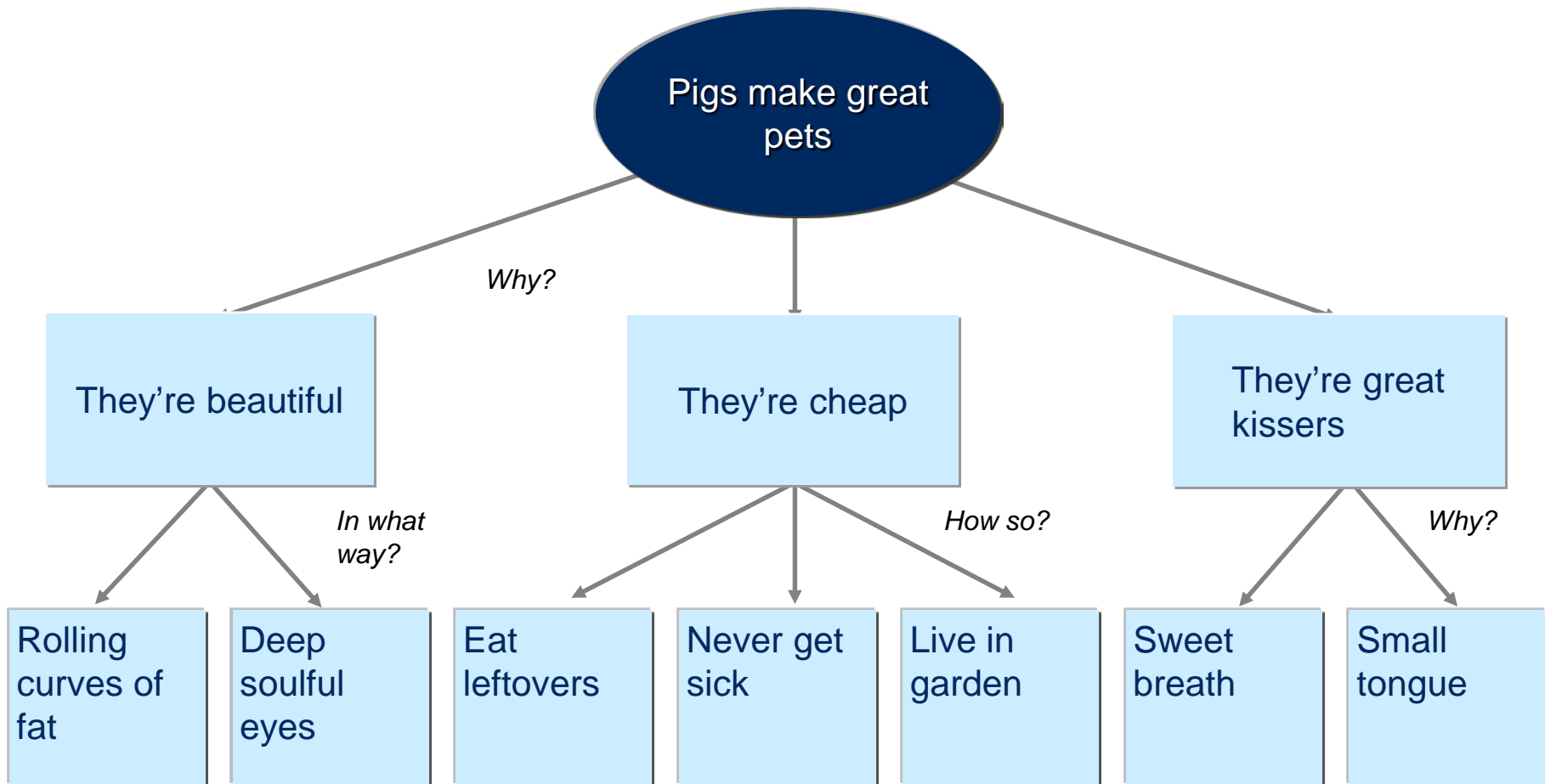
- Set up a question/answer dialogue that will pull reader with great interest through your reasoning
- Telling reader something she doesn't know raises the question of why? How? Answer is then below the pyramid. Each answer then tells something she doesn't know, so you must again provide answers on the line below
- Refrain from raising any questions in reader's mind before you are ready to answer them. e.g. Don't provide assumptions before giving the major points
- Forces you to present information only as the reader needs it

EXERCISE 1: PIG PYRAMID

Instructions:

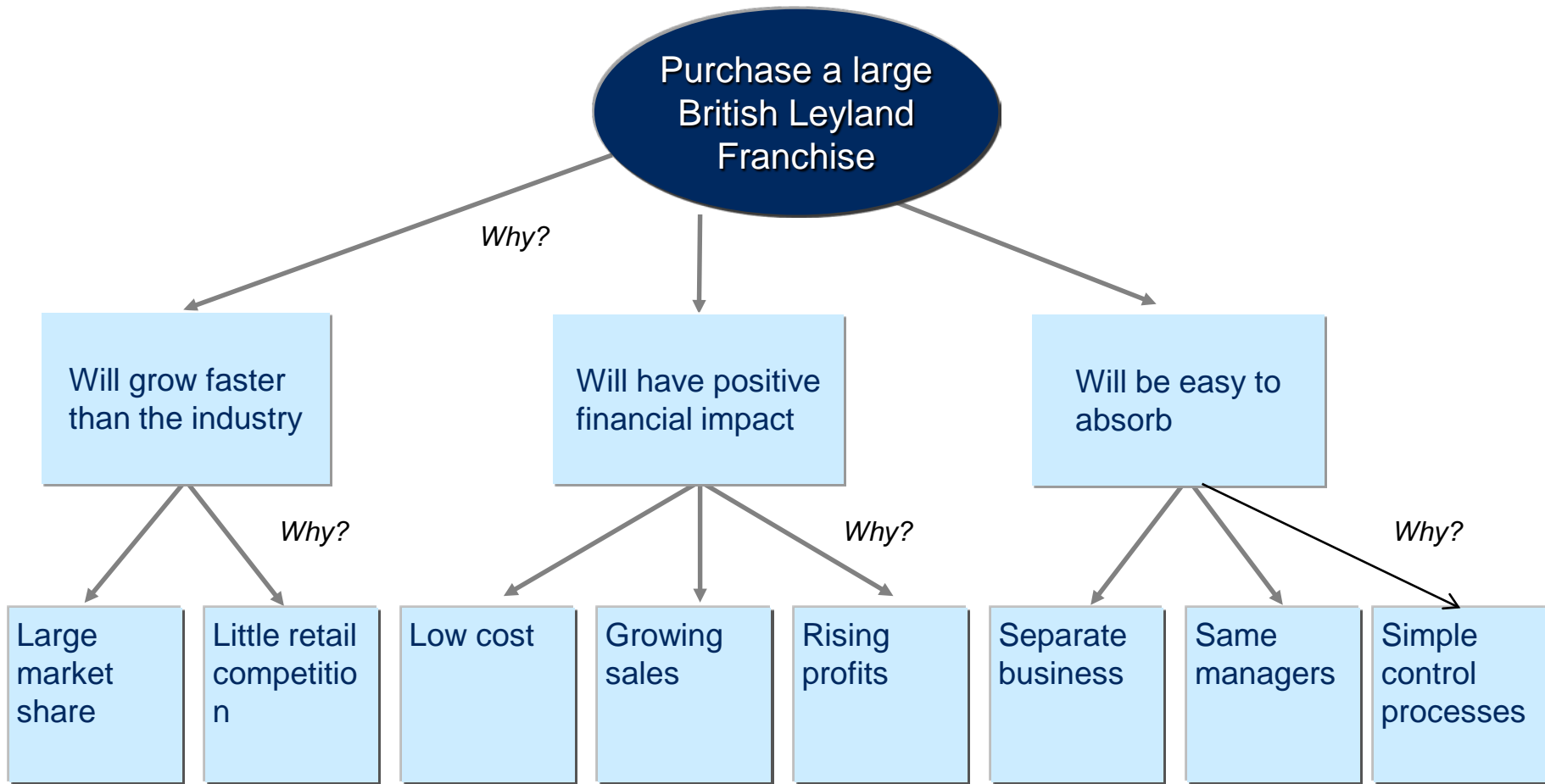
Organize the cards and construct into a pyramid structure

EXERCISE 1: PIG PYRAMID ANSWER



Any point you make must raise a question in the reader's mind, which you answer horizontally on the line below

BRITISH LEYLAND FRANCHISE EXAMPLE



Value of pyramid structure is that it forces visual recognition of the vertical questions/answer relations on you as you work out your thinking

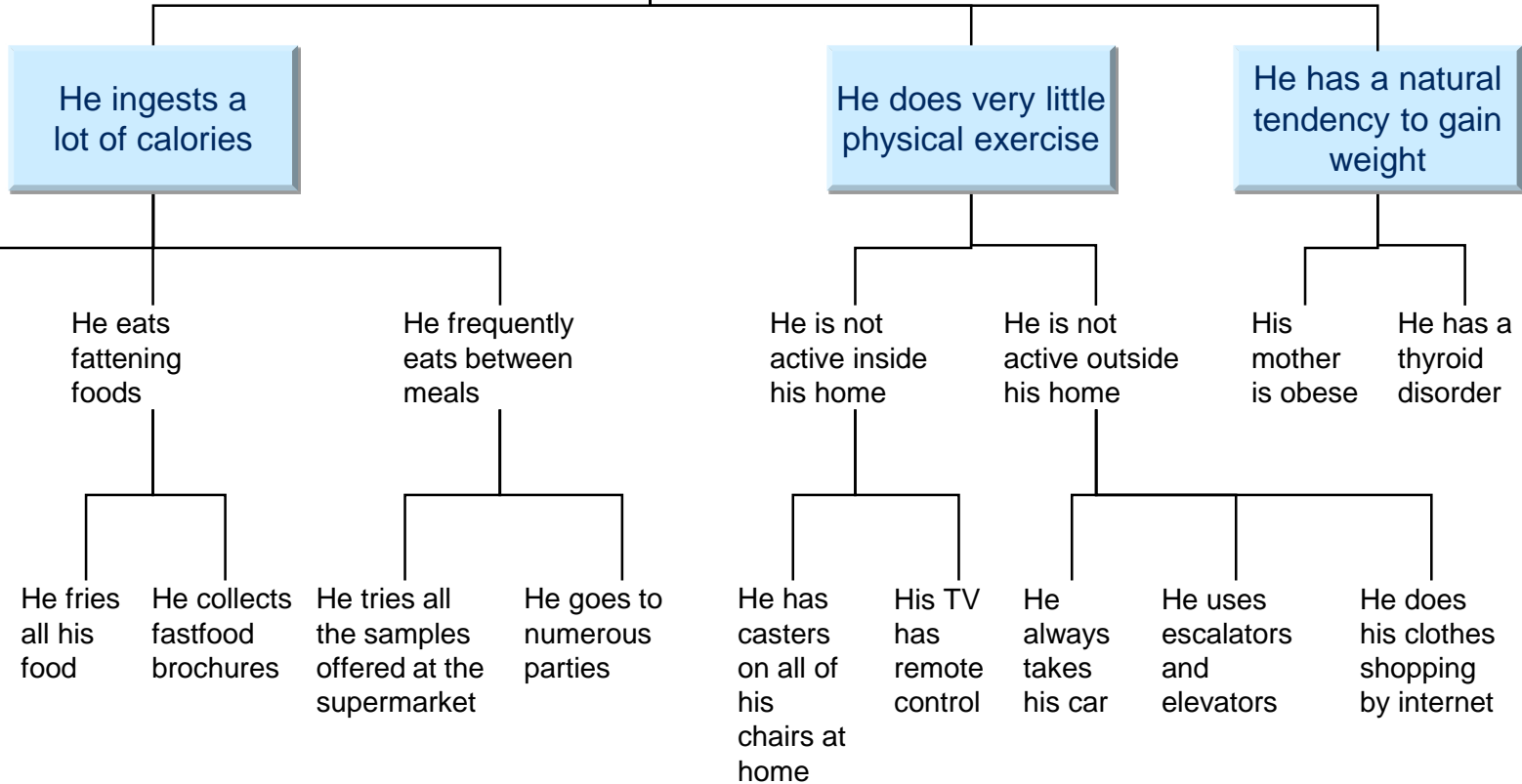
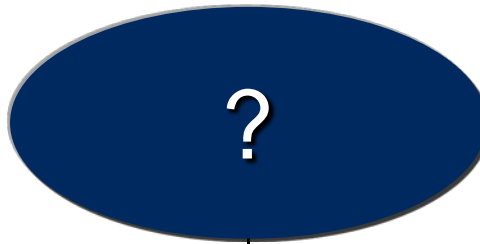
EXERCISE 3: BERT EXAMPLE

Instructions:

Organize the cards and construct into a pyramid structure



EXERCISE 3: AND BERT'S SO WHAT IS ...?



THE PYRAMID DICTATES A SET OF SUBSTRUCTURES - HORIZONTAL RELATIONSHIP

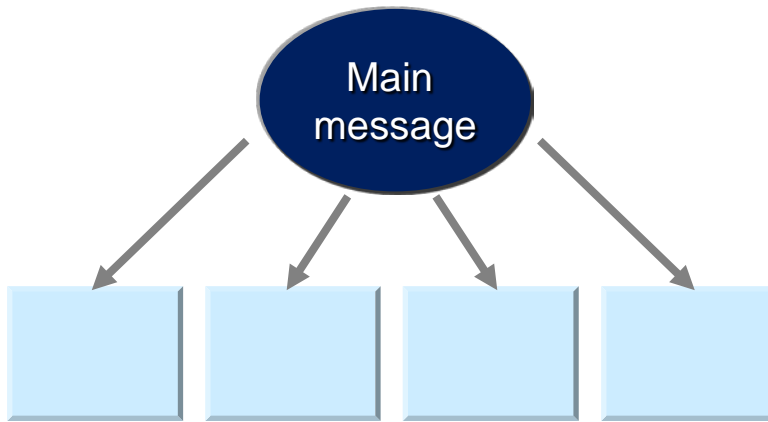
Pyramid substructures

- 1 Vertical relationship between points and subpoints
- 2 Horizontal relationship within a set of subpoints
- 3 Narrative flow of introduction

- Answers must be logical: present a clear inductive or deductive argument. One or the other but not both at once
- Deductive reasoning: presents an argument in successive steps. First idea makes a statement about a situation, second idea comments on the subject or statement, the third idea states the implication of those two situation. The third point draws a “therefore” from the previous two.
- Inductive reasoning: take a set of ideas that are related simply by describing them by same plural noun (e.g. reasons, steps, schemes, etc)

HORIZONTAL RELATIONSHIP MUST BE INDUCTIVE OR DEDUCTIVE REASONING

Inductive (or grouping)



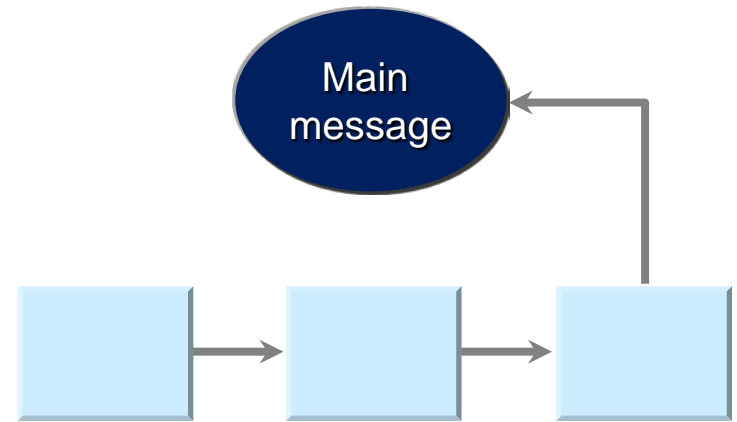
Reasons

Actions

Receptive reader

What? Why? How?

Deductive (or argument)



Reasoning

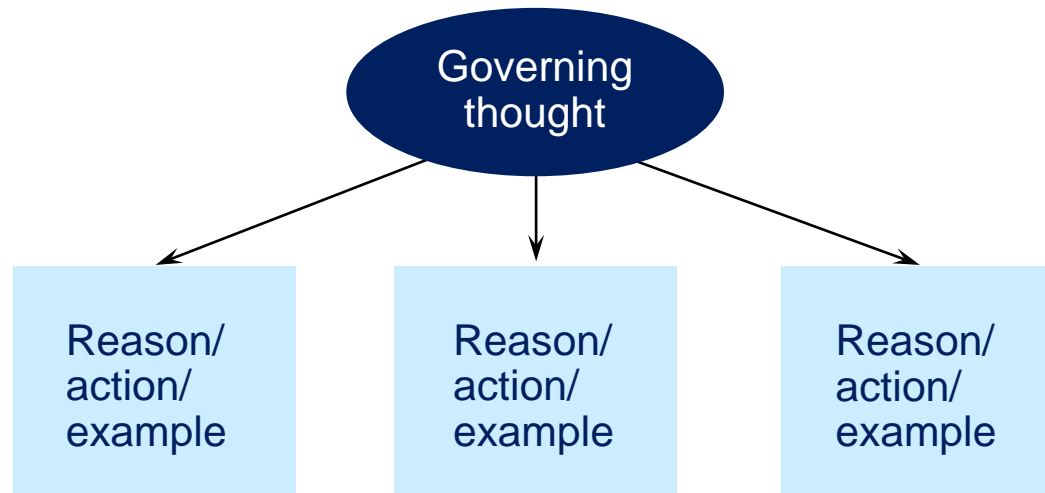
Need for action

Resistant reader

Why?

VS.

INDUCTIVE OR GROUPING PROVIDES SEVERAL LOGICALLY SEQUENCED PIECES OF SUPPORT, ALL OF WHICH CAN BE DESCRIBED BY A COMMON NOUN



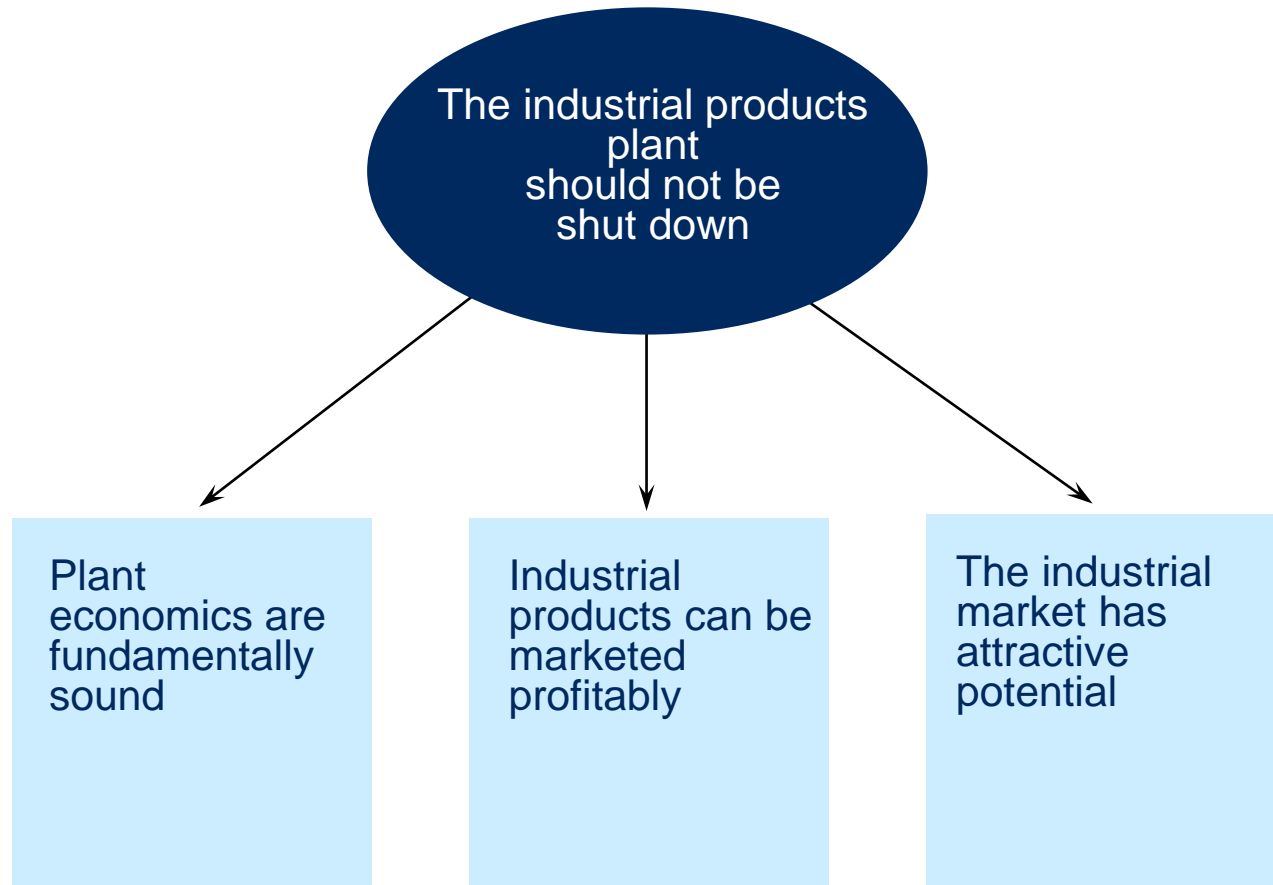
Pros

- Highly effective for action-oriented readers
- Major points easy to remember
- If one point is rejected, remaining points may still persuade

Cons

- Could be too forceful/direct for some readers

INDUCTIVE REASONING: A INDUCTIVE GROUPING CAN HAVE 2 TO 5 POINTS TYPICALLY AND RESULTS IN AN INFERENCE AS THE GOVERNING THOUGHT



INDUCTIVE REASONING: POLAND EXAMPLE

Synthesis

Poland is about to be invaded

Summary

Foreign tanks are massing at the Polish border

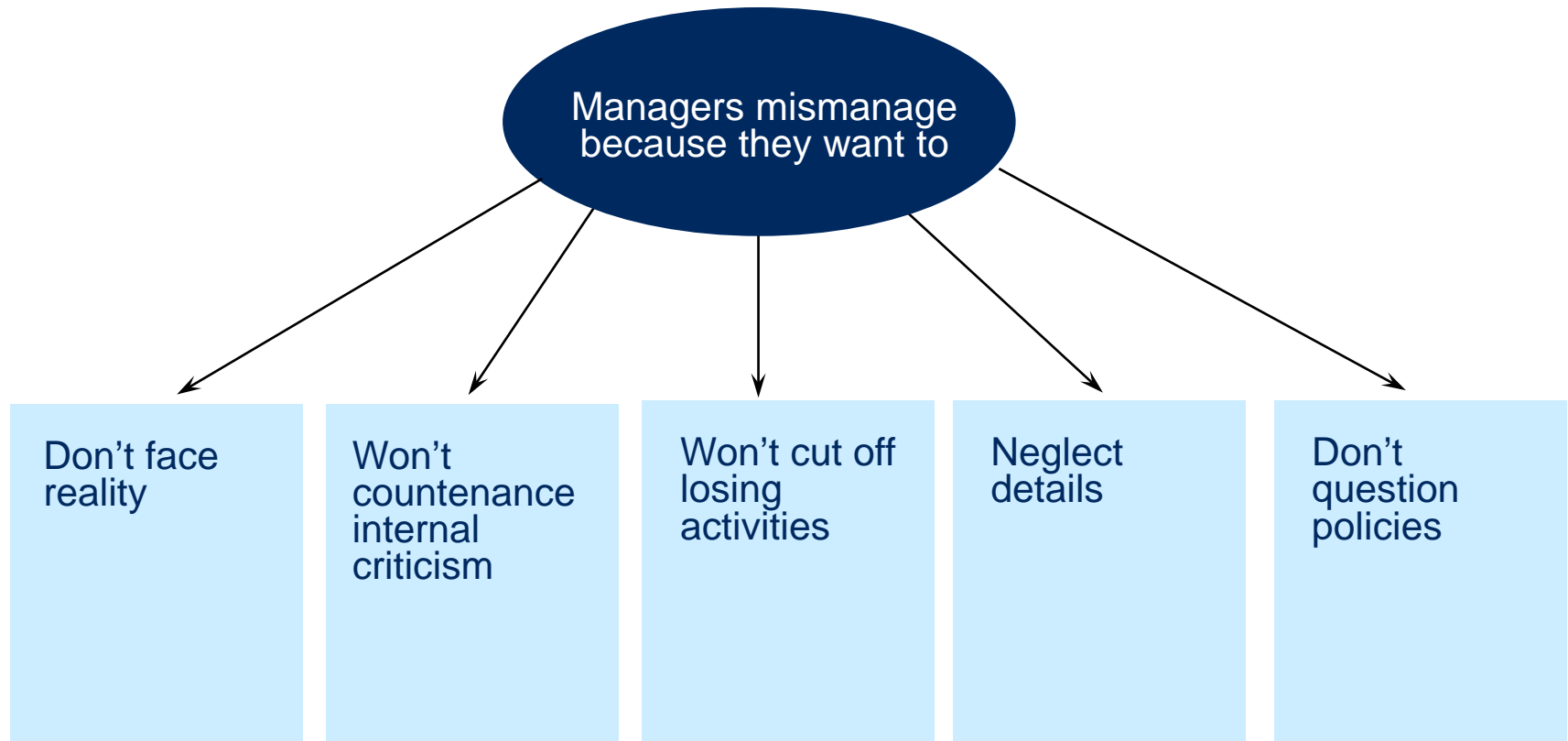
Facts

Russian tanks are at the Polish border

French tanks are at the Polish border

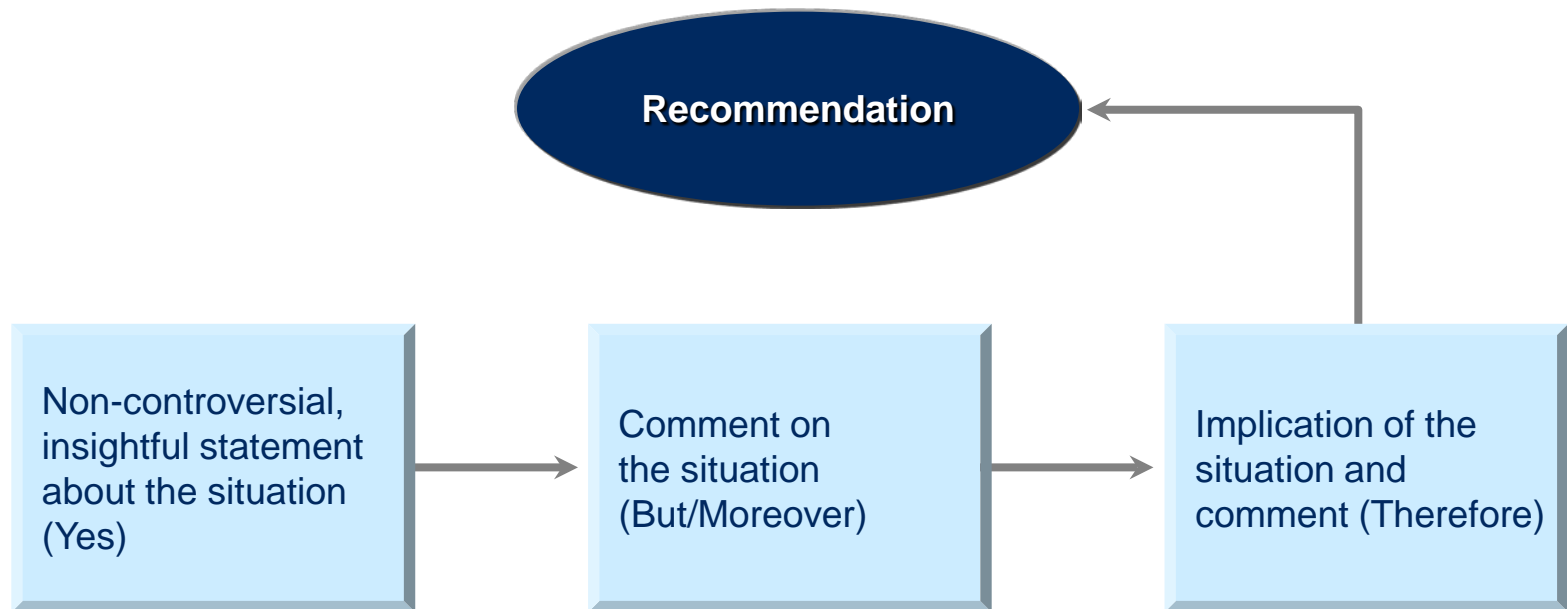
German tanks are at the Polish border

INDUCTIVE REASONING: THE INFERENCE SHOULD NOT GO BEYOND THE GROUPING



Can you infer that they mismanage because they want to?

DEDUCTIVE REASONING: A LOGICAL ARGUMENT DEMONSTRATES A CHAIN OF REASONING IN WHICH EACH THOUGHT GROWS OUT OF THE THOUGHT PRECEDING IT



Pros

- Demonstrates no other avenue will work
- Presents all conclusions/ recommendations at the same time
- Is particularly effective with resistant readers

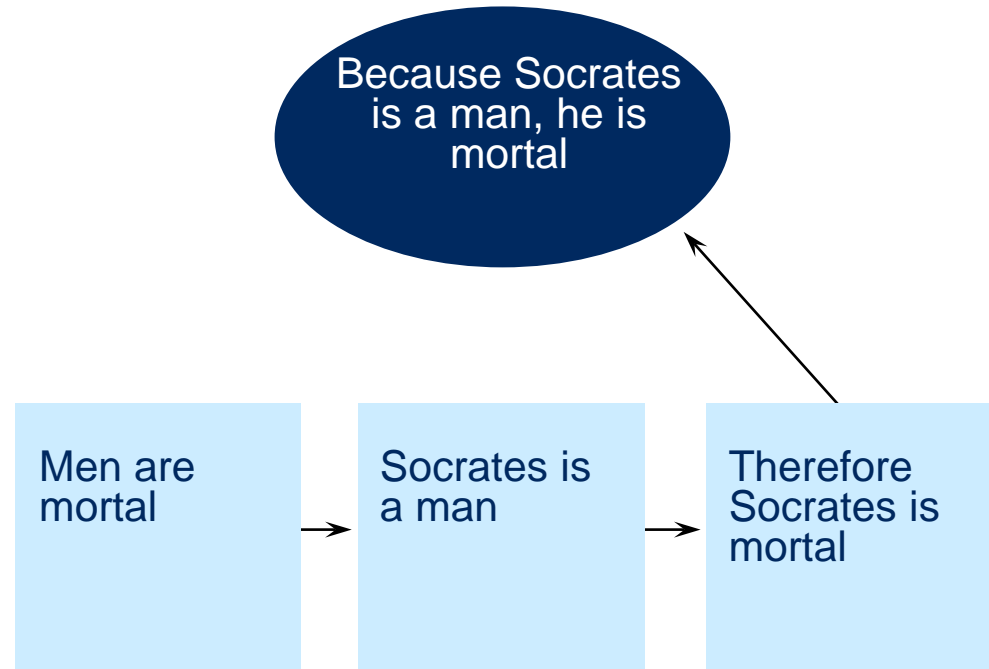
Cons

- Can fail to persuade if reader disagrees with "situation" or "comment"
- Requires reader to remember a lot of information before getting to the "so what?"

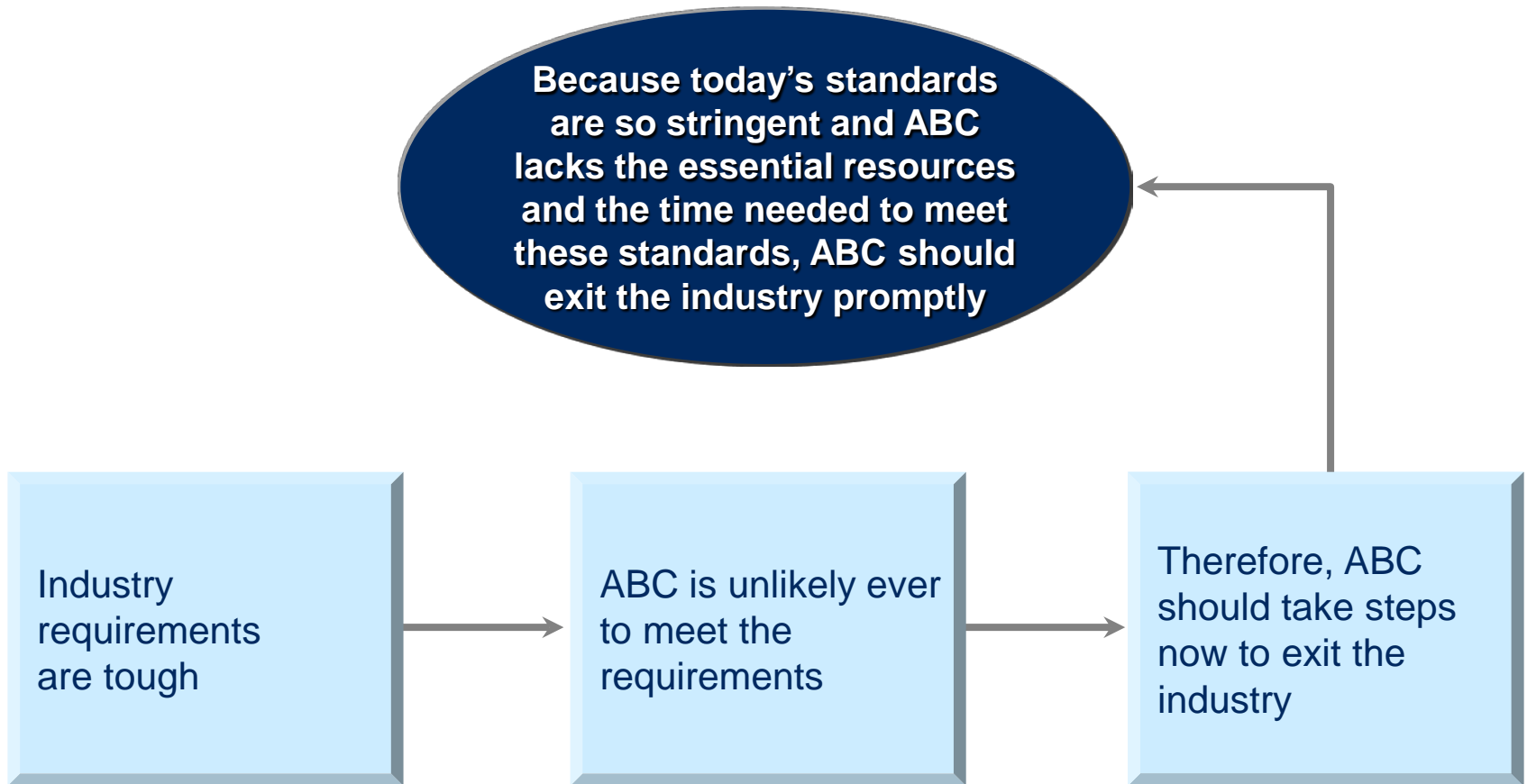
DEDUCTIVE REASONING: EXAMPLE

Deductive argument process

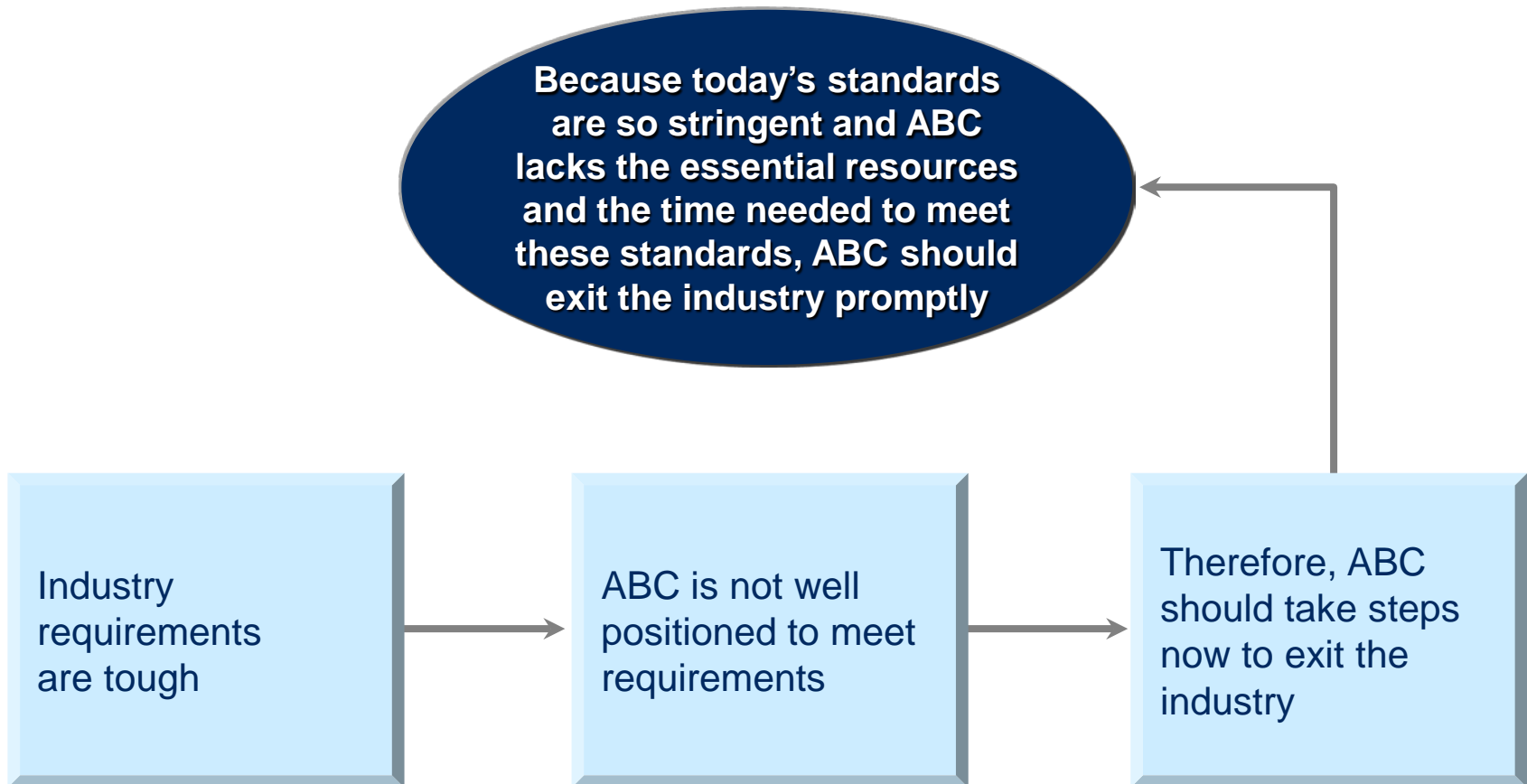
- Make a statement about a situation that exists in the world
- Make another statement about a related situation. The second statement relates to the first if it comments on either its subject or its predicate
- State the implication of these two situations existing in the world at the same time



DEDUCTIVE REASONING: ABC EXAMPLE



ARGUMENTS REQUIRE TIGHTLY LINKED REASONING



ARGUMENT PYRAMID



EXERCISE 4: HOUSE EXAMPLE

Instructions:

Organize the cards and construct into a deductive reasoning structure

EXERCISE 4: THE HOUSE PYRAMID ANSWER

To be more comfortable
and to remain sane, we need
to do extensive work
on our house

Our house is
too small

- One bath is deadly with 2 teenagers and 2 pre-adolescents

- Three bedrooms aren't enough for our growing family

- We can't fit a large enough table in the kitchen for all of us

- It looks as though my mother will come to live with us next year

Although we could afford
to buy a new house, we
don't want to

- The schools are excellent and within walking distance

- The house has our kind of charm

- We love our 5 acres and wonderful trees

- All family members have good friends in the neighbourhood

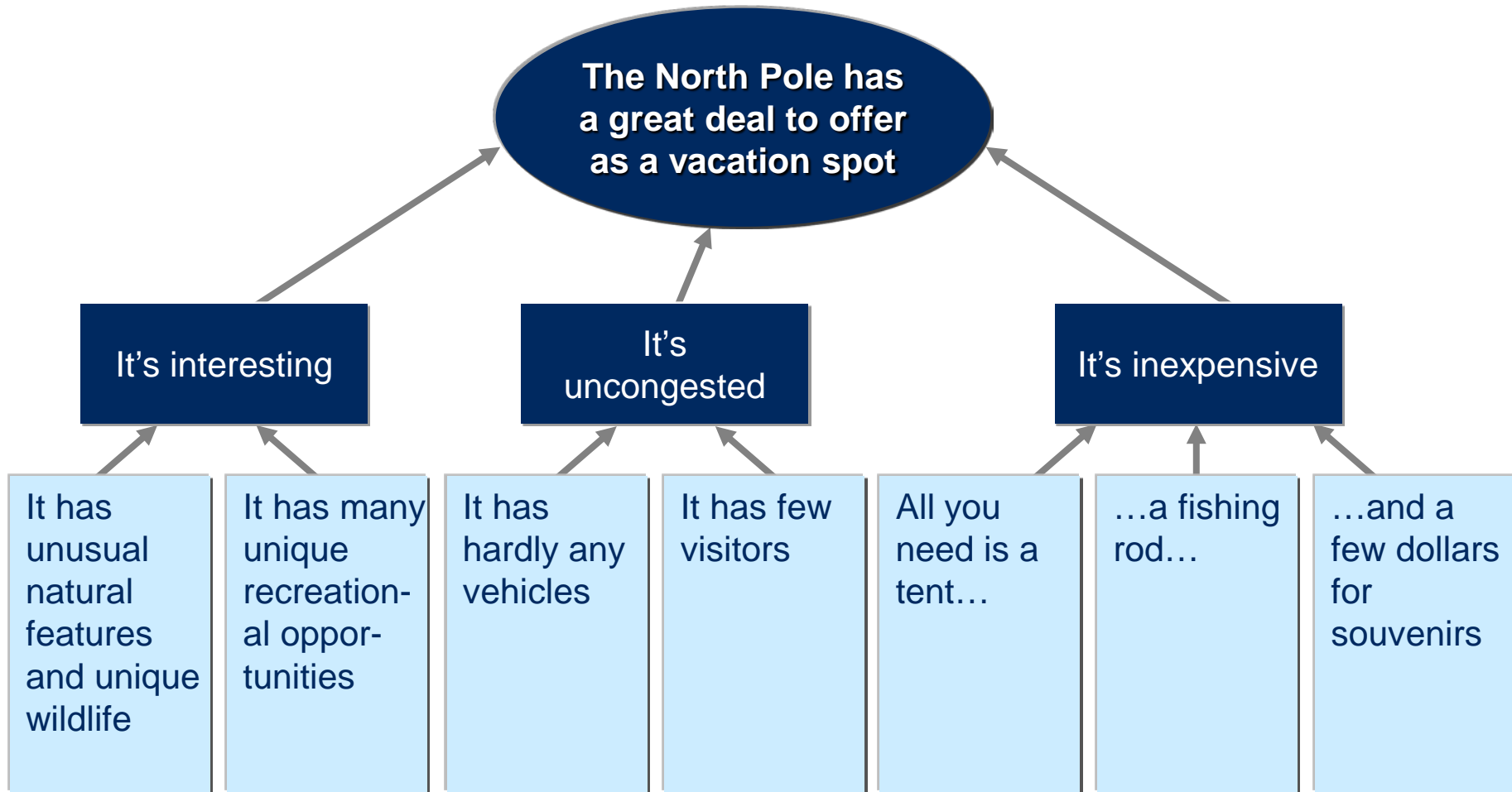
We should remodel

- Add 2 bedrooms with a connecting bath

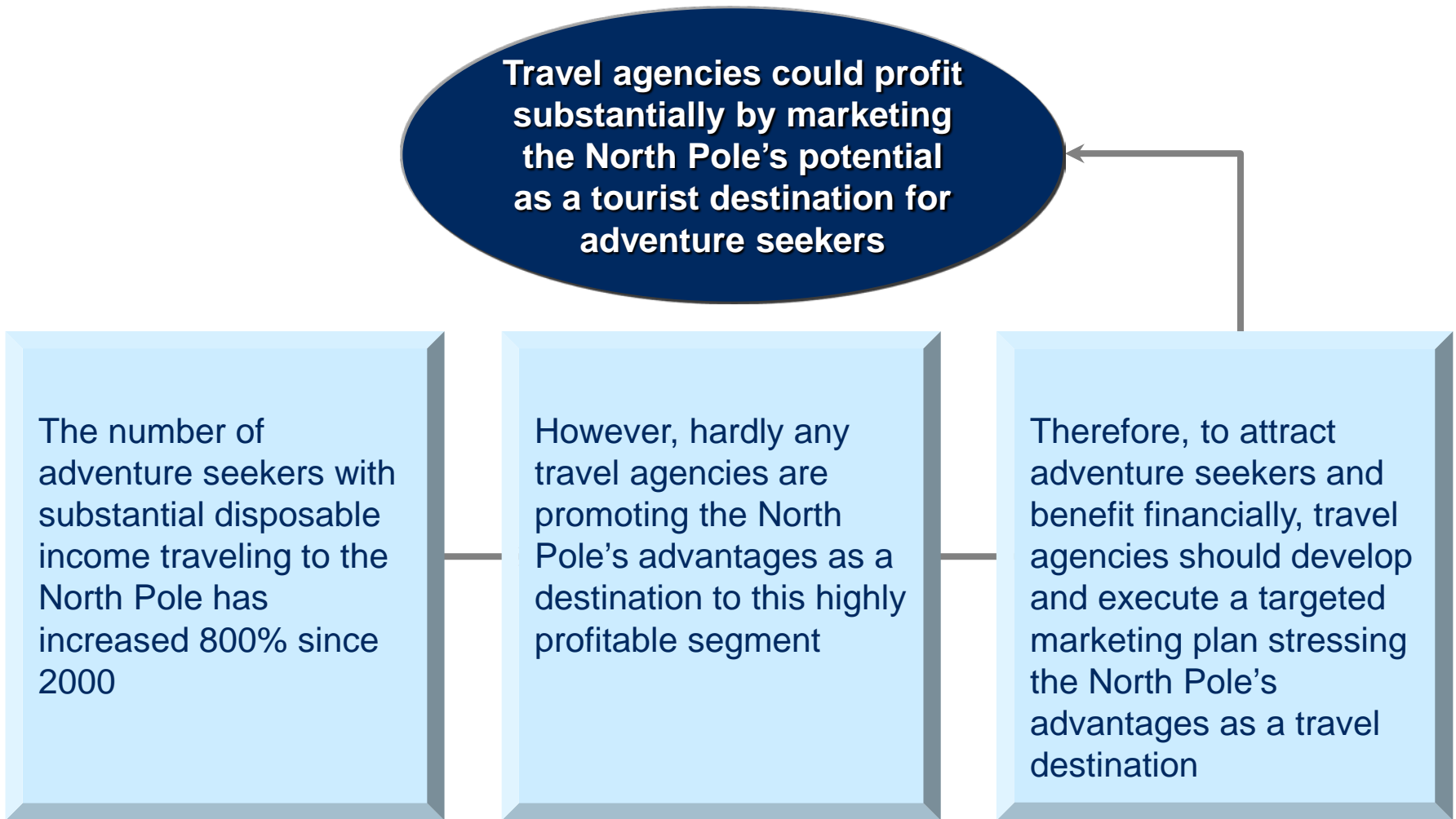
- Bump out a wall in the kitchen to create more space

- Add a mother-in-law suite, with a separate entrance

INDUCTIVE REASONING: POSSIBLE PYRAMID FOR TRAVEL AGENCY



DEDUCTIVE REASONING: POSSIBLE PYRAMID FOR TRAVEL AGENCIES



THE PYRAMID DICTATES A SET OF SUBSTRUCTURES - NARRATIVE FLOW OF INTRODUCTION

Pyramid substructures

- 1 Vertical relationship between points and subpoints
- 2 Horizontal relationship within a set of subpoints
- 3 Narrative flow of introduction

- Question/answer dialogues need to engage his interest, and can only do so when it is relevant to him
- Relevance ensured by making sure it directly answers a question that already exists in his mind
- Introduction identifies that question by tracing the history of its origin
- Classic pattern of story-telling
 - **S**ituation
 - **C**omplication
 - (Question)
 - **R**esolution

THE BENEFITS OF A STORY IS TO ESTABLISH A COMMON POINT AND TRIGGER THE QUESTION IN READER'S MIND

- Best to tell the reader things you know he will agree before telling him things reader may disagree
- Easy reading of agreeable points is apt to render reader more receptive to your ideas than confuse plodding through a morass of details

- Situation: Start at a point where you can make self-sufficient and noncontroversial statement about the subject
- Complication: the complication in the story you are telling, and creates a tension that triggers the Question
- Resolution: gives the answer to the Question that is triggered and leads to the key lines of your document

EXAMPLE INTRODUCTION: BEFORE

The purpose of this memorandum is to pull together some ideas for further reflection and discussion in such questions as:

1. Composition of the Board and its optimum size
2. A conception of the broad roles of the Board and the Executive Committee, the specific responsibilities of each, and the relationship of one to the other
3. Making the outside Board member an effective participant
4. Some principles dealing with the selection of Board members and their tenure
5. Alternate ways for the company to get from where it is to where it wants to be in Board and Executive Committee operations

EXAMPLE INTRODUCTION: AFTER

Situation

The new organization installed in October places full authority and responsibility for running the day-to-day activities of the two divisions squarely on the shoulders of the managers of those divisions. This move frees the Board to deal entirely with the broad matters of policy and planning that are its exclusive responsibility.

Complication

However, the Board has for so long oriented itself to dealing with short term operating problems that is it not presently in a position to focus its attention effectively on long-range strategy development. Consequently, it must consider the changes needed to permit itself to do so. Specifically, we believe it should:

- Relinquish responsibility for day-to-day operating matter to the Executive Committee
- Broaden its composition to include outside members
- Establish policies and procedures to formalize internal operations

Resolution

TIPS YOU CAN USE FOR RESOLUTION KEY LINES

Tips you can use for key lines

- Key messages early on for long documents: set the points out early by providing executive summary and enable reader to get your entire thinking in the first 30 sec of reading
- Highlight topic sentences for short documents: use the points as topic sentences to your paragraphs and underline or bold them so they jump out at the reader

Some Common patterns

- A Giving direction: What should we do? Or how should we do it?
- B Seeking approval to spend money: should we do it?
- C Explaining “how to”: How should we do it?
- D Choosing among alternatives: What should we do?

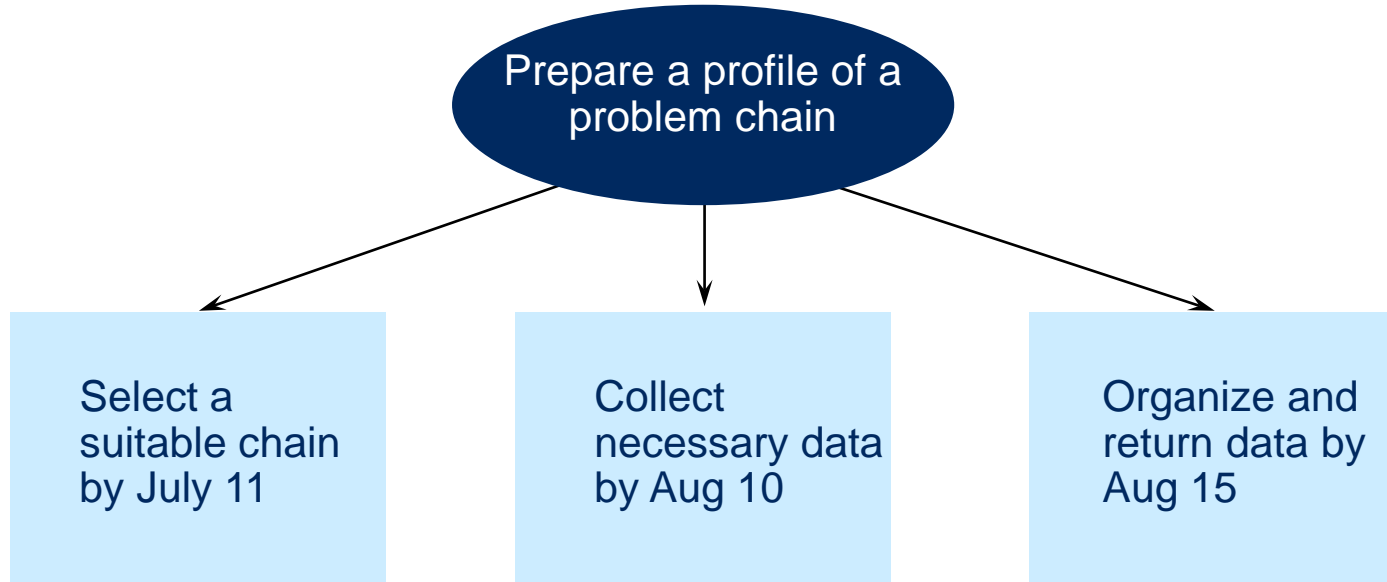
A GIVING DIRECTIONS EXAMPLE: DIRECTIVES PLANT THE QUESTION FOR THE READER

Example

S = We want to teach you to give a presentation

C = Need information on a problem chain from each region

R = Prepare a profile of a problem chain



Whenever the question is “how?” the answer is always “steps”

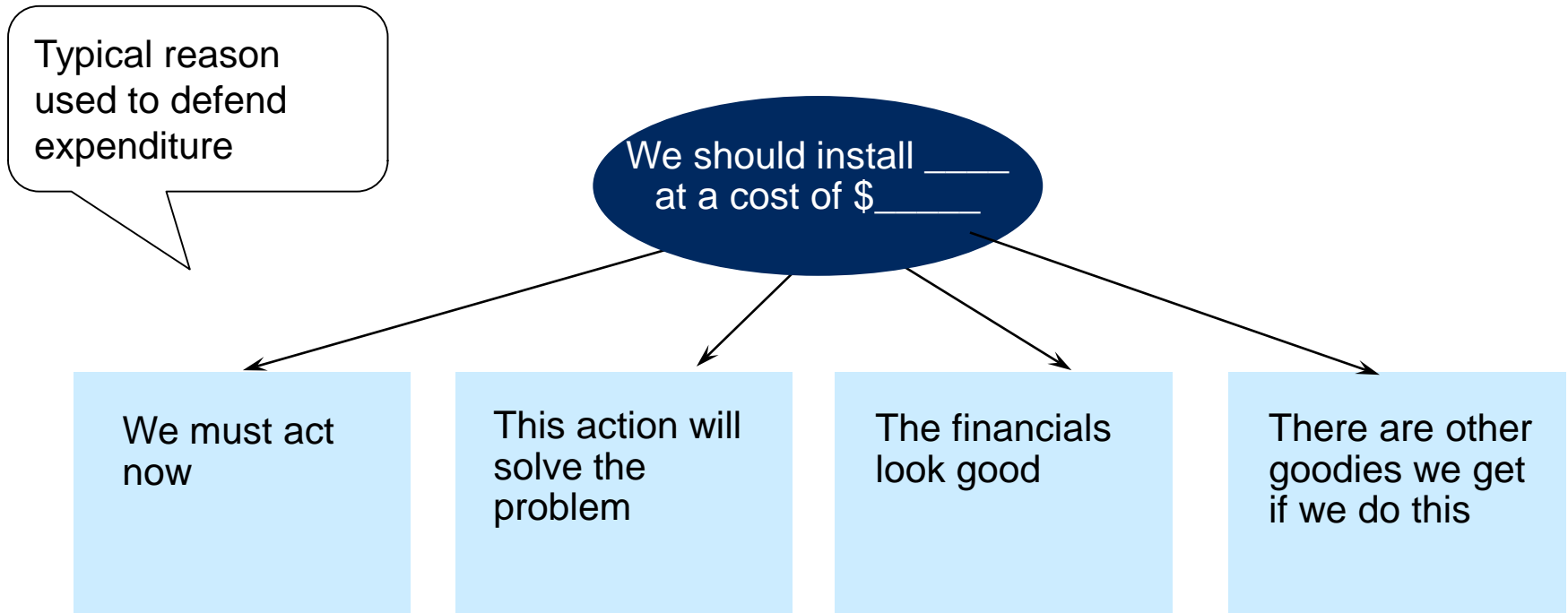
B SEEKING APPROVAL TO SPEND MONEY EXAMPLE

Example

S = Department has X employees and covers Y product line

C = Work in department increased but head count maintained the same. Backlog growing and satisfaction is down

R = We should install _____ at a cost of \$_____



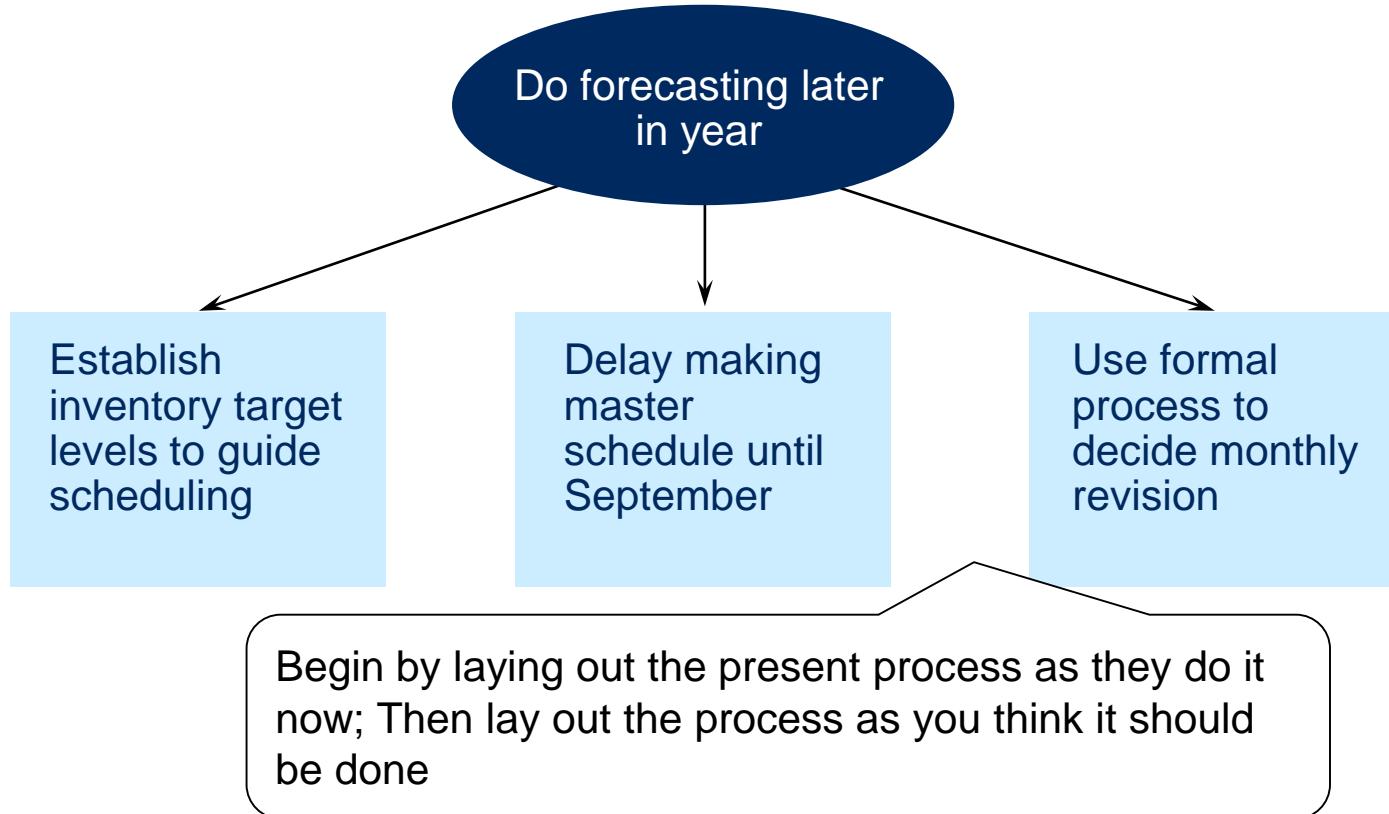
C EXPLAINING “HOW TO” EXAMPLE

Example

S = Your present system is X

C = It doesn't work properly

R = Do forecasting later in year



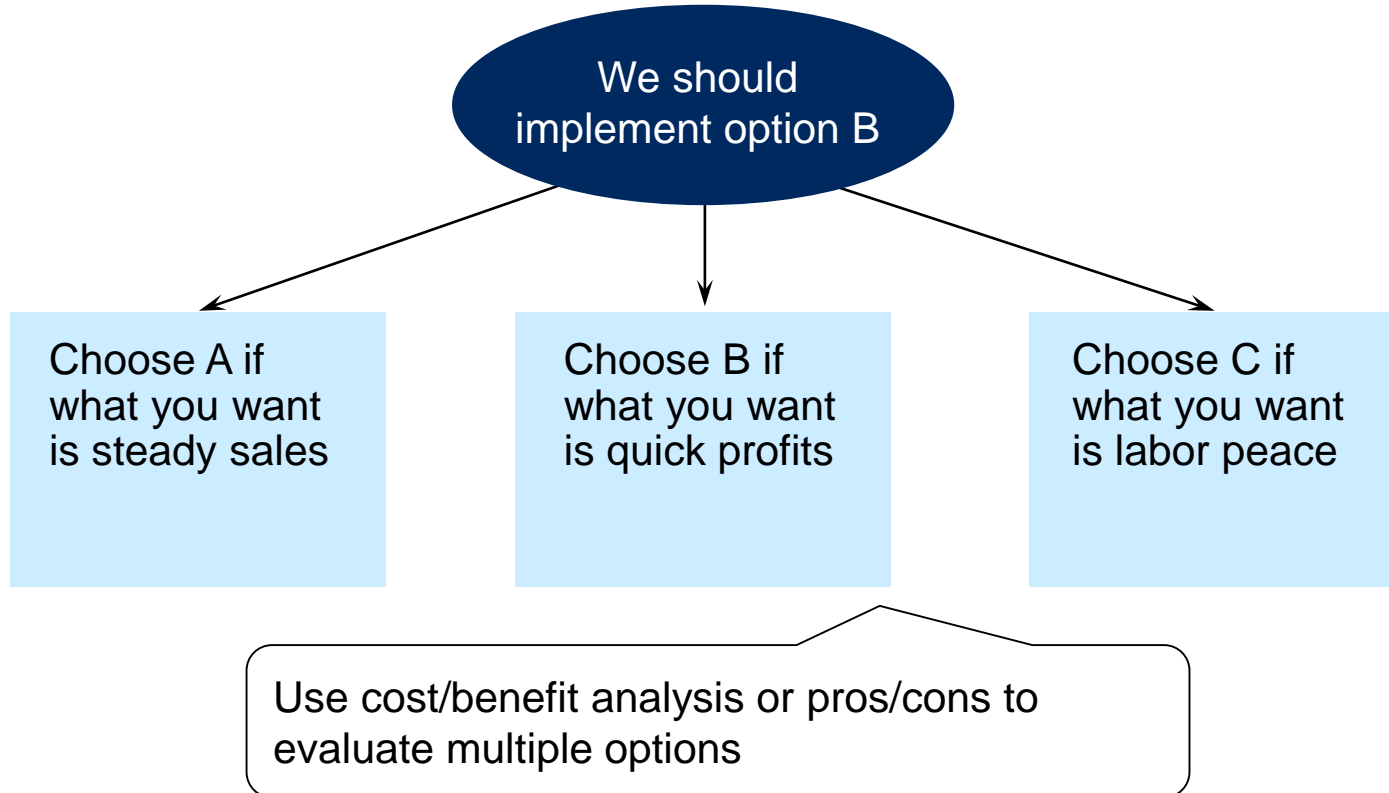
D CHOOSING AMONG ALTERNATIVES EXAMPLE

Example

S = We want to do X

C = We have alternative ways of doing it

R = We should implement option B



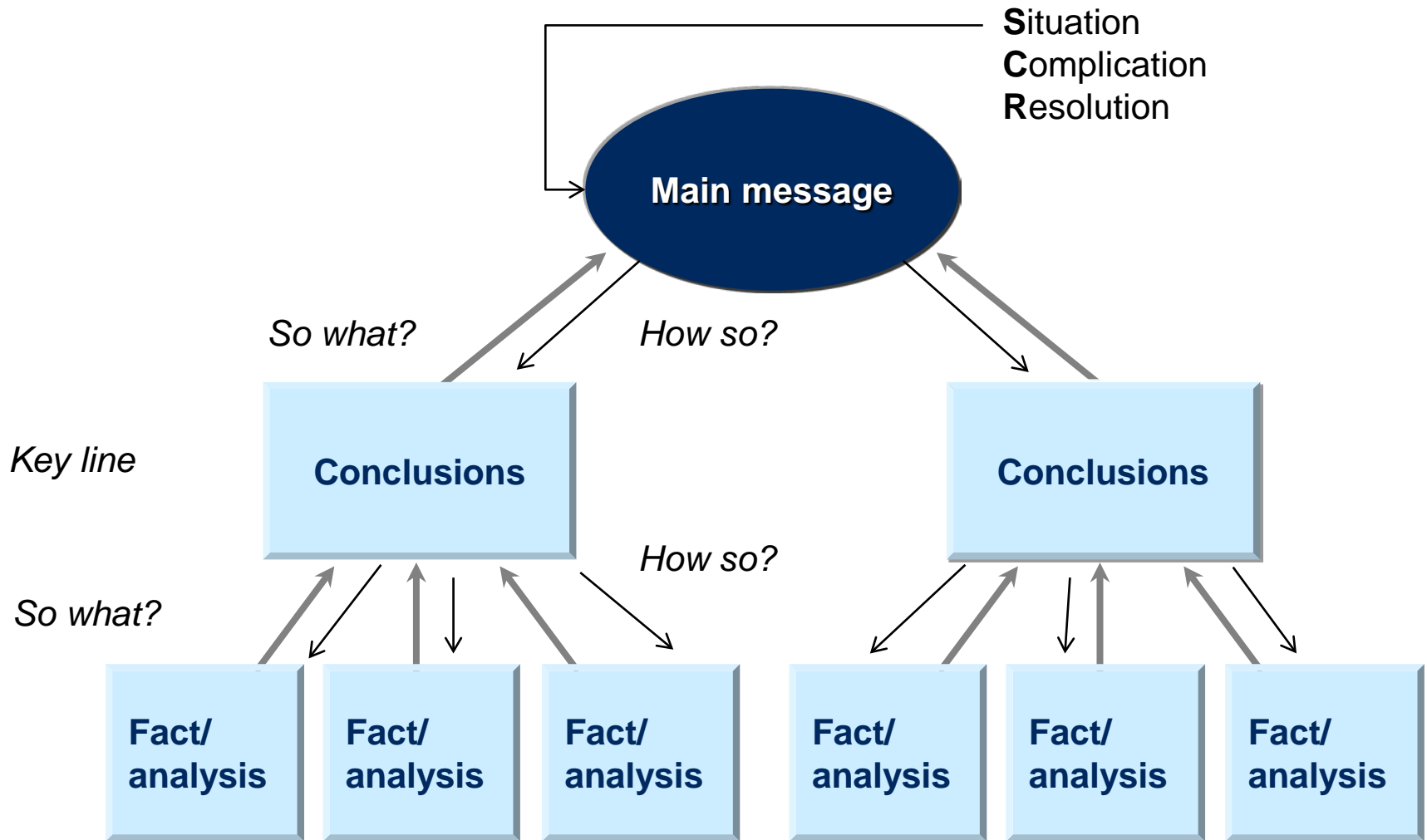
STORY LINING AGENDA

Introduction to pyramid structure

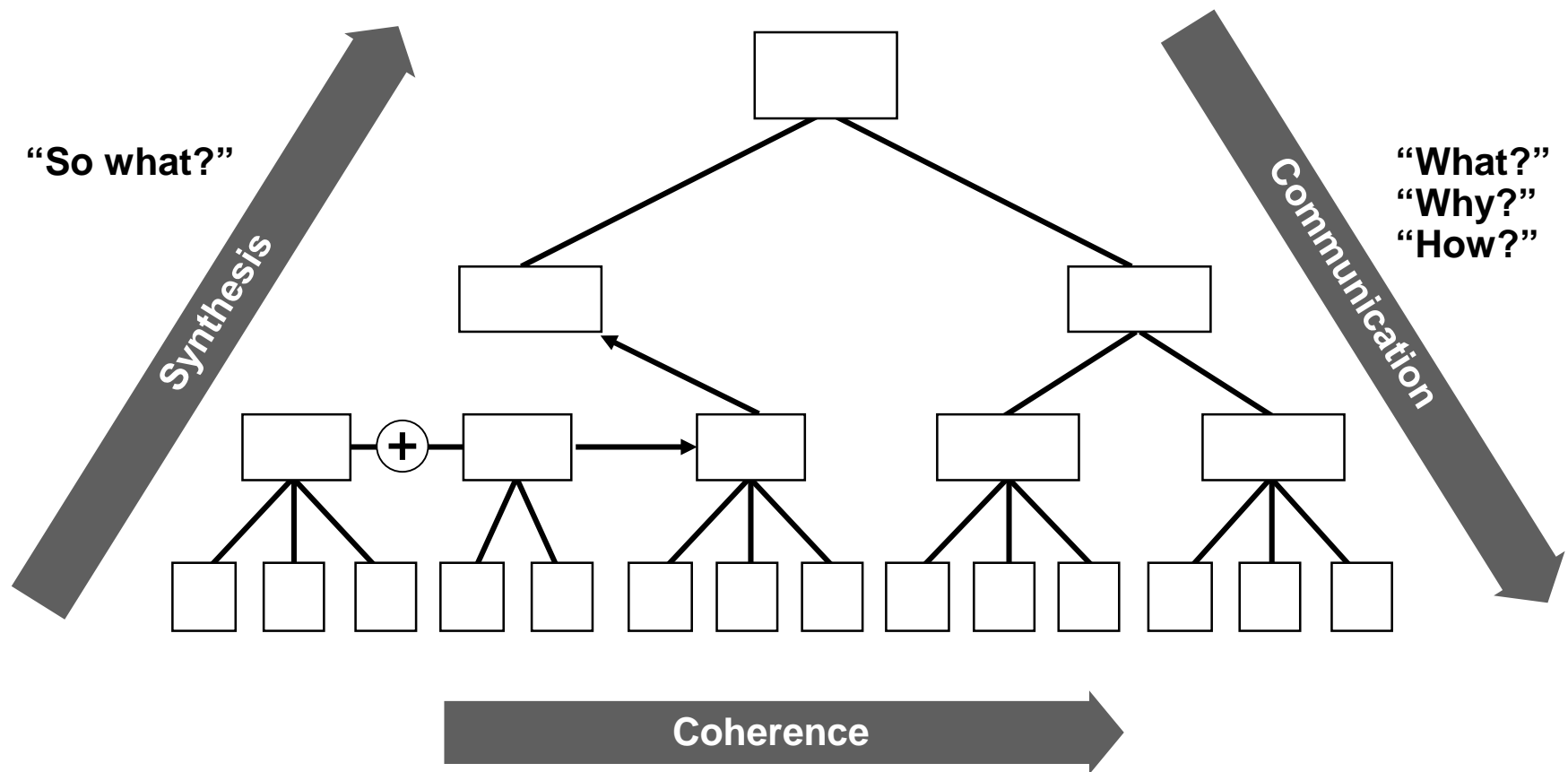
Structures within the pyramid

How everything comes together

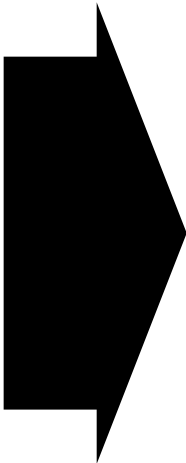
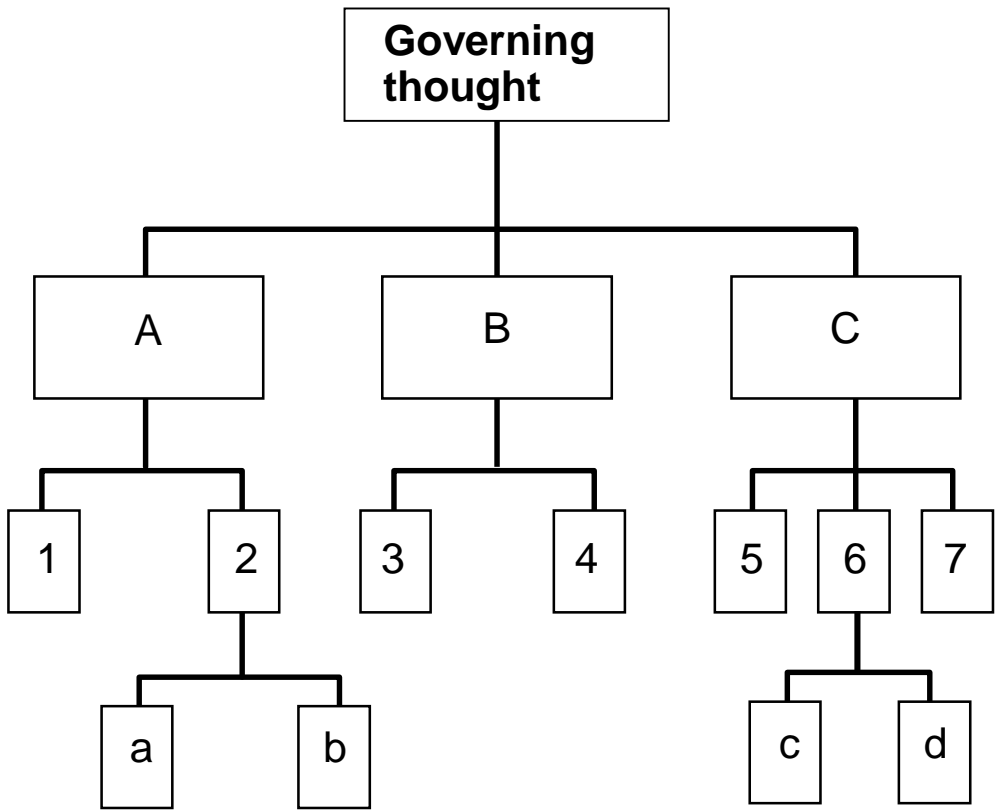
HOW EVERYTHING COMES TOGETHER



ATTRIBUTES OF THE PYRAMID



FROM PYRAMID TO DOCUMENT STRUCTURE



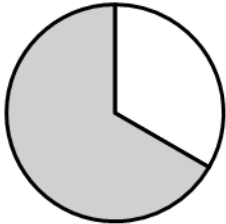
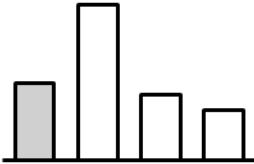
Governing thought

- Major A
- Minor 1
 - Minor 2
 - Support a
 - Support b

- Major B
- Minor 3
 - Minor 4

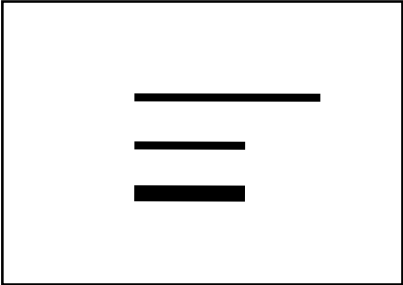
- Major C
- Minor 5
 - Minor 6
 - Support c
 - Support d
 - Minor 7

FROM PYRAMID TO STORYBOARD

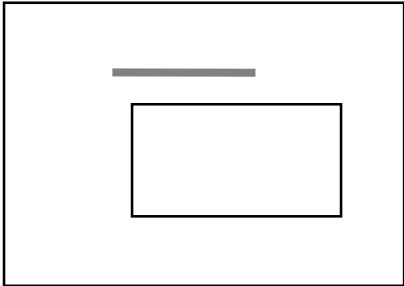
<div>Document title</div> <div>Client name</div> <div>Document type</div> <div>Place, Date</div>	<div>Introduction/ context</div> <div>1</div>	<div>Governing thought</div> <div><ul style="list-style-type: none">• “Major”• “Major”• “Major”</div> <div>2</div>
<div>MAJOR</div> <div><div>¶ “Minor”</div><div>¶ “Minor”</div></div> <div>3</div>	<div>“Minor”</div> <div>So what/message</div> <div></div> <div>4</div>	<div>“Minor”</div> <div>So what/message</div> <div></div> <div>5</div>

STORYBOARD TO THE REAL WORK!

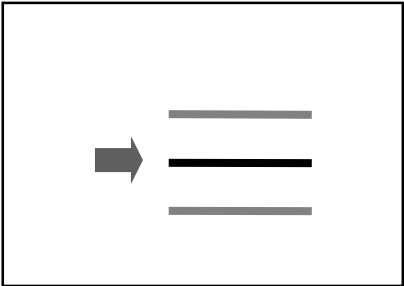
Title page



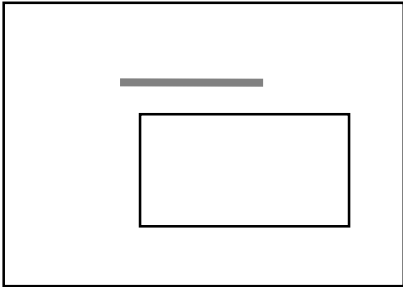
Executive summary



Contents/tracker page



Next steps

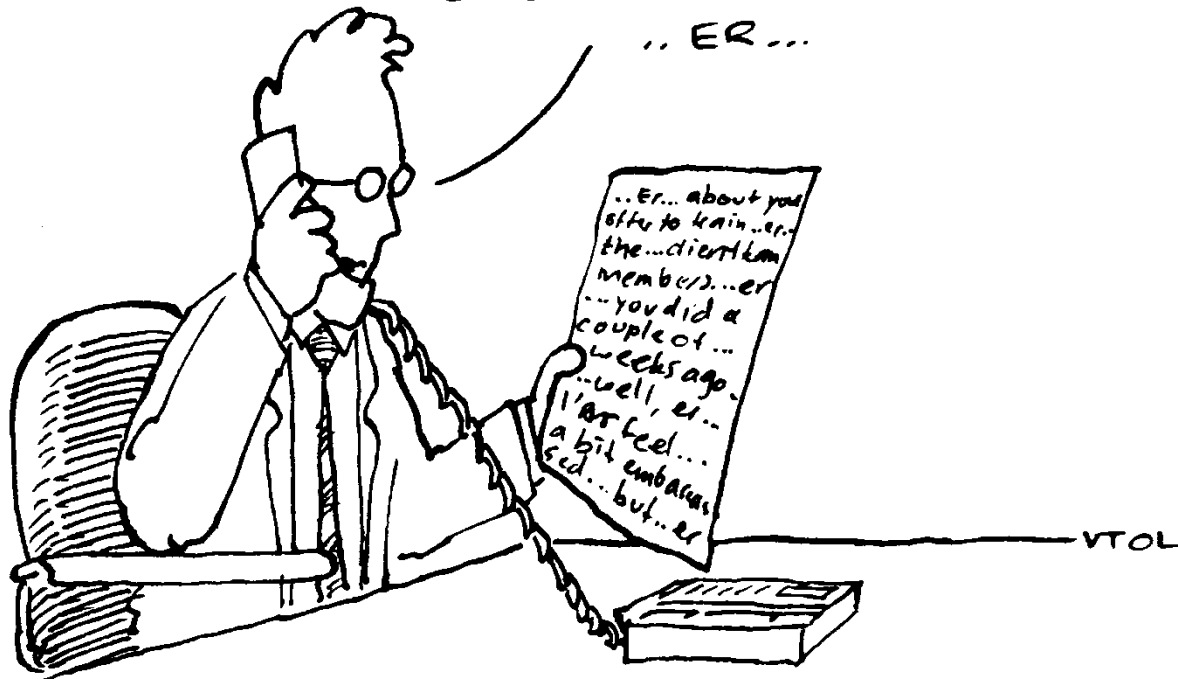


THINK THE MESSAGE THROUGH

...ER...ABOUT YOUR OFFER TO TRAIN...ER...
THE...CLIENT TEAM MEMBERS...ER...
YOU DID A COUPLE OF WEEKS AGO...
...WELL, ER...

...I...ER...FEEL A BIT
EMBARRASSED...BUT...

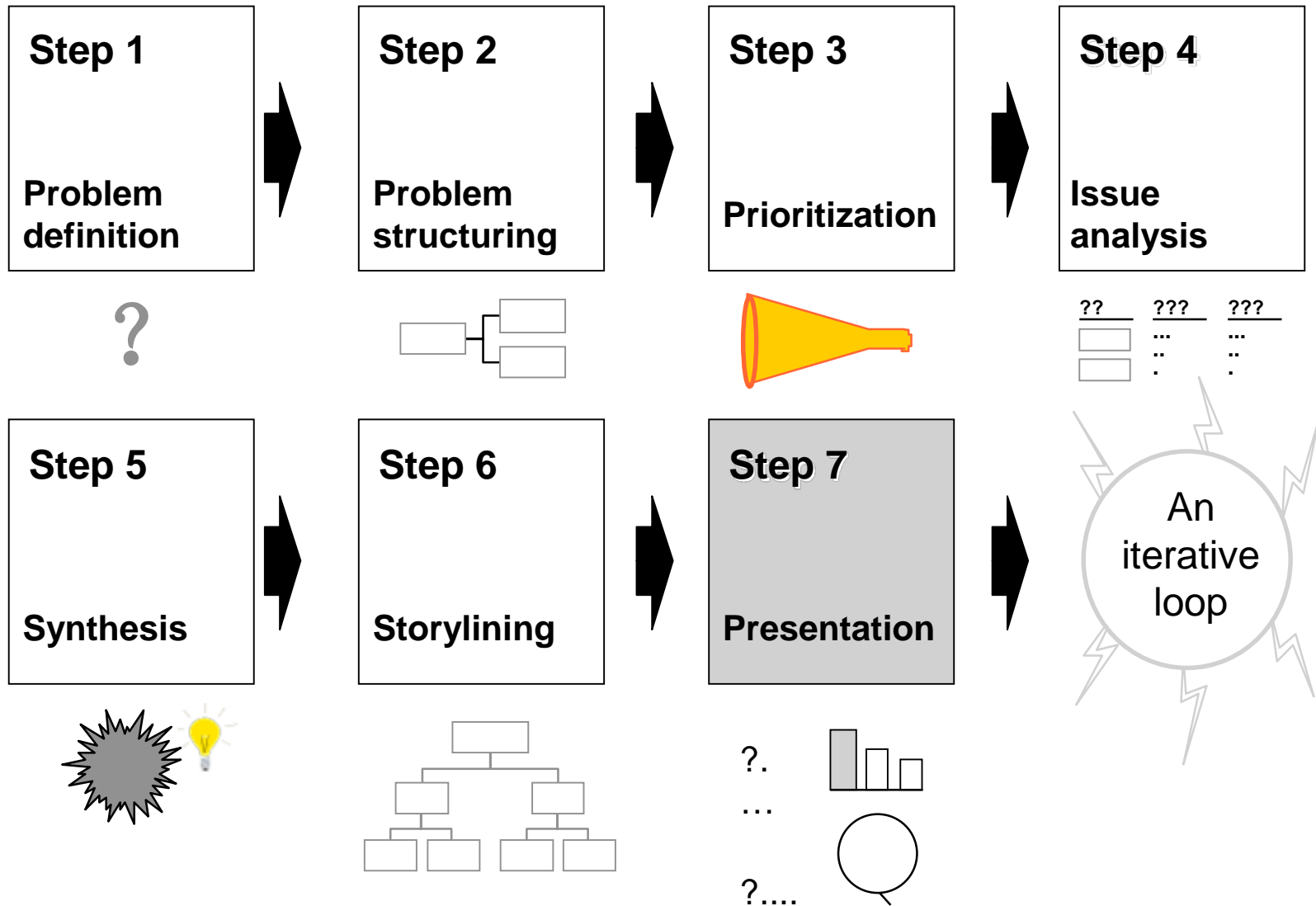
..ER...



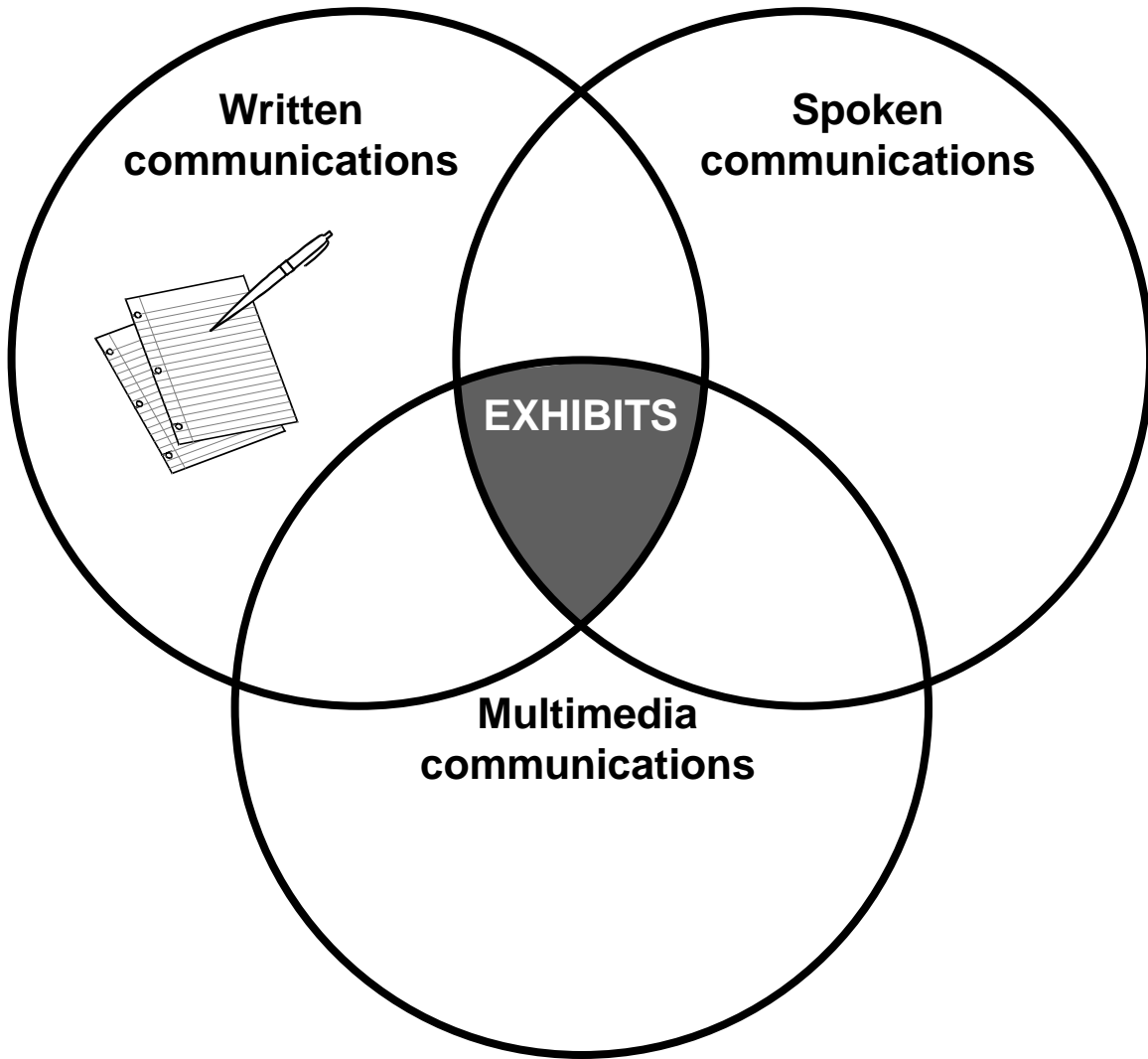
EXERCISE: STORYLINE

-
- Create an executive summary for your presentation using the S-C-R framework
 - Determine if you would use an inductive or deductive pyramid, and create second the level of the pyramid accordingly
 - Team breakout discussion for 20 minutes
-

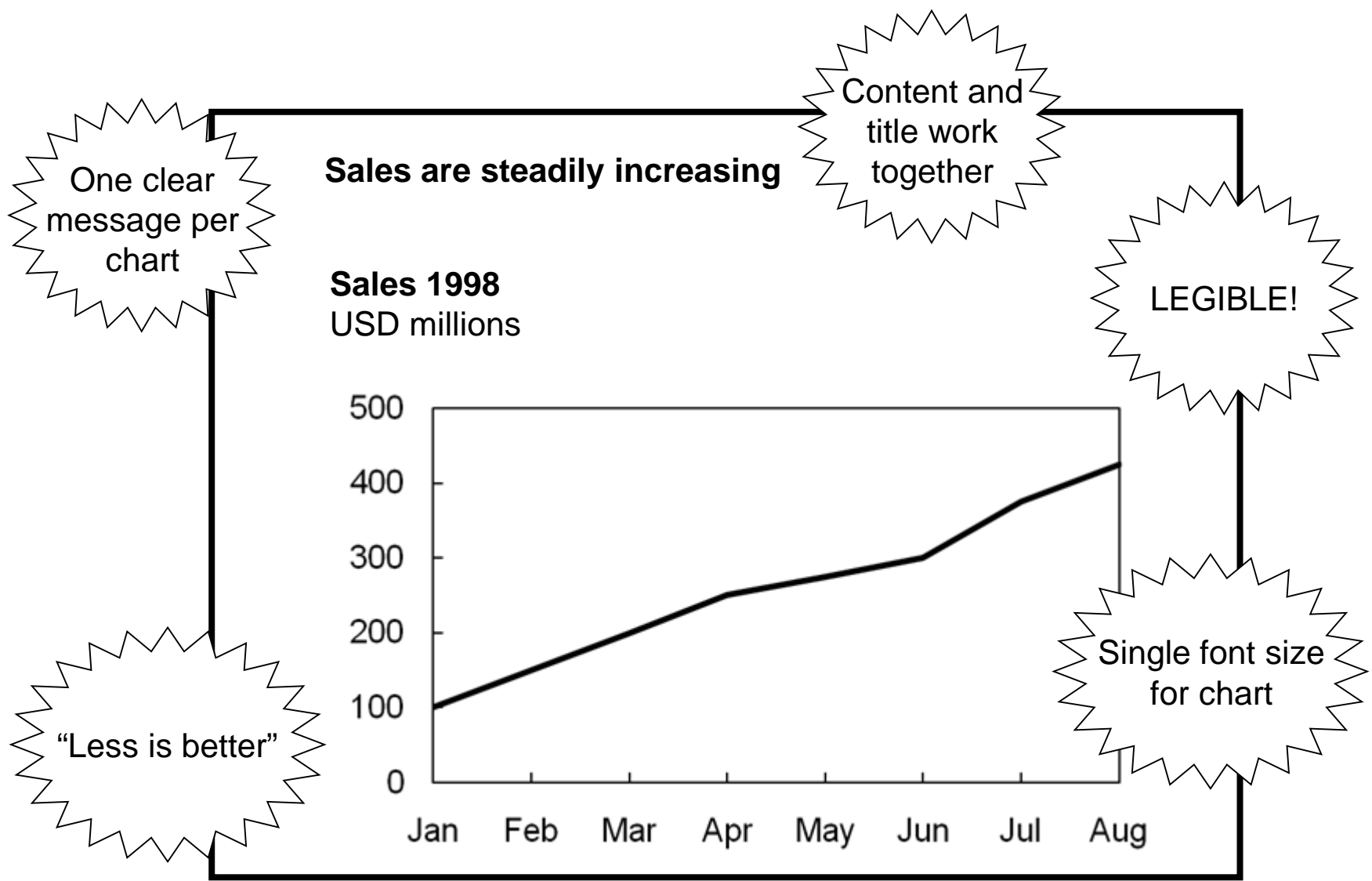
7-STEP PROBLEM SOLVING LOOP



EXHIBITS PLAY A MAJOR ROLE IN ALL COMMUNICATIONS



SUCCESSFUL CHARTS CONTAIN SEVERAL ESSENTIAL CHARACTERISTICS...



... AND SHOULD FOLLOW A FEW GUIDELINES

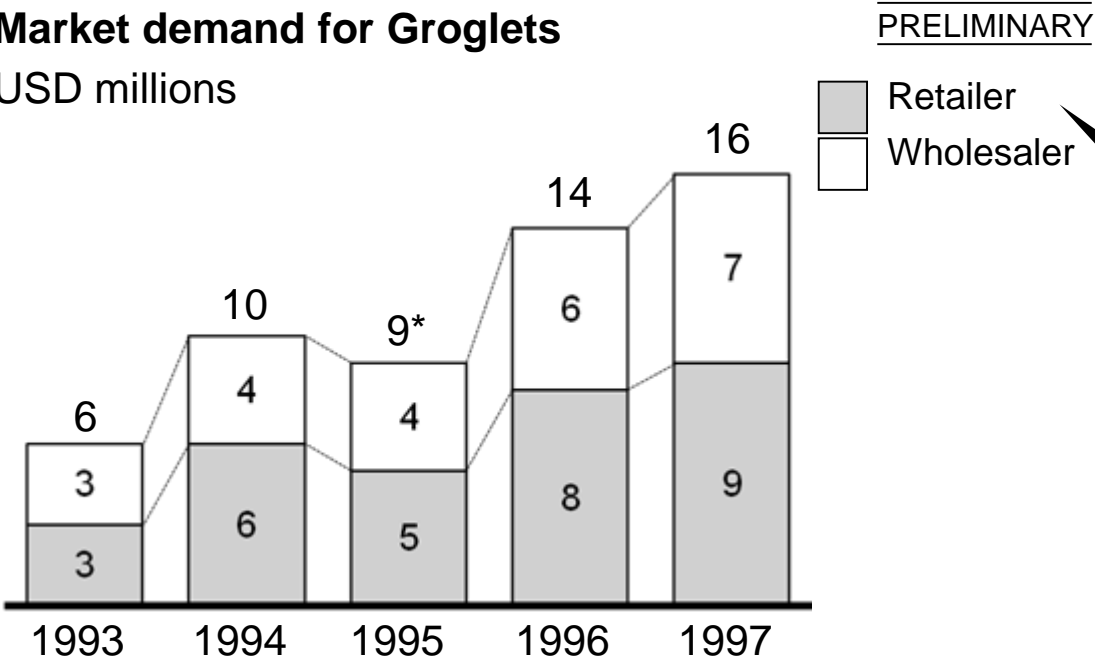
Message title
States your interpretation
of the presented data

Exhibit title
Describes subject of chart

Footnote
Comments on single chart element

Demand for Groglets has more than doubled over the past 5 years

Market demand for Groglets
USD millions



Sticker
Comments on content of chart (optional)

Legend
Describes meaning of shading (optional)

* Poison found in can of Groglets, February 1995
Source: Groglets, Inc.; Trendsearch, Inc.

Source
Gives credibility to data, allows us to use reference

HOW TO DESIGN SUCCESSFUL EXHIBITS

- **Quantitative**

- Non-quantitative
 - Concept visuals
 - Text visuals

EXERCISE

Sketch as many charts as you can using this data:

Percentage of January sales by region

	<u>Company A</u>	<u>Company B</u>
North	13	39
South	35	6
East	27	27
West	25	28

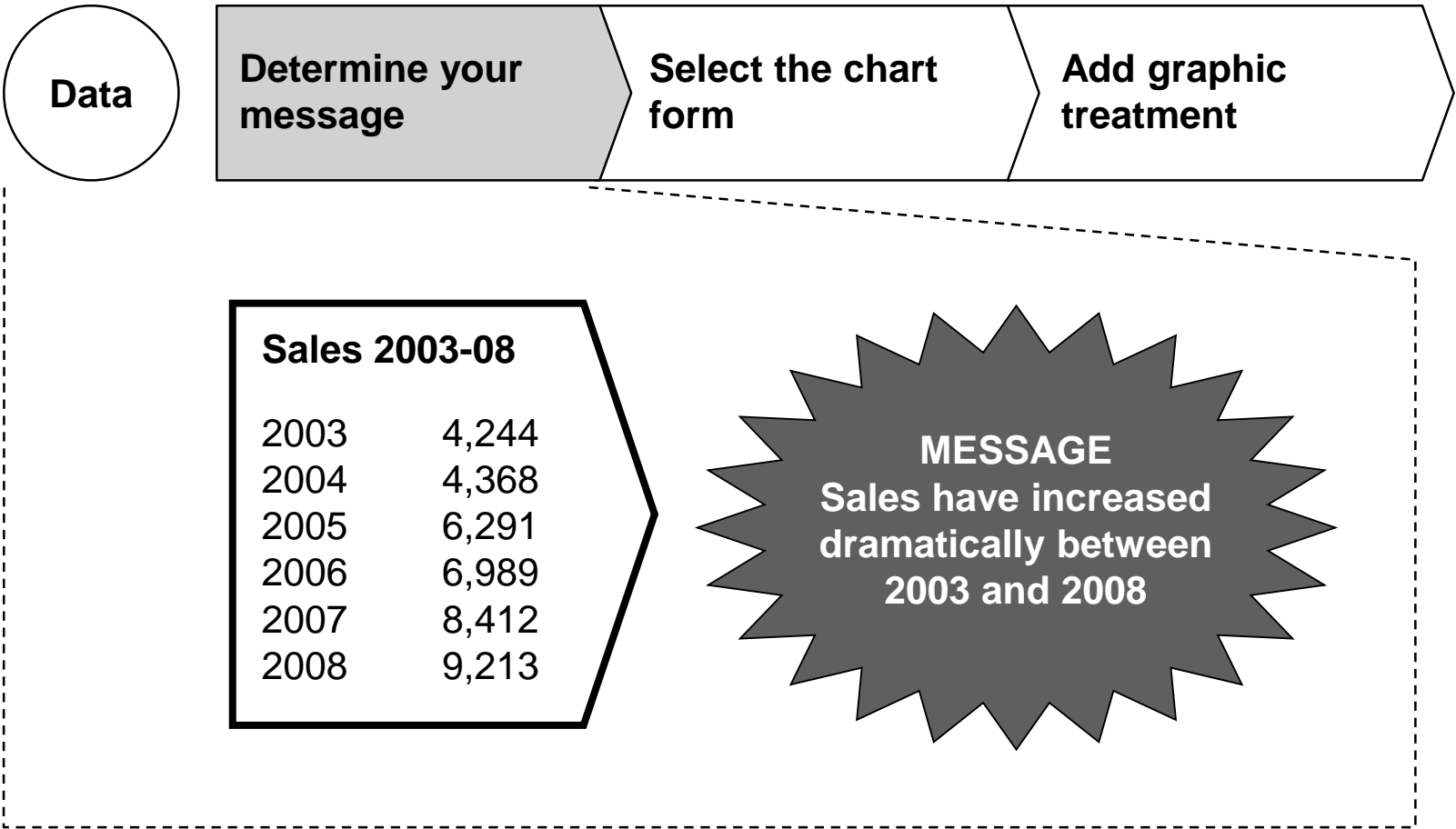
ANSWERS

Could have been pie chart, column chart, bar chart, or grouped bars, descending order or bar.

But which one to use all depends on the message you want to bring forward

STEP 1: ANALYZE YOUR DATA AND DETERMINE YOUR MESSAGE

Data and metric does not determine the chart, but it's your message and point that you want to make



EXERCISE: WHAT COULD BE THE MAIN MESSAGES FROM THIS CHART?

Write down the answers on your own (5 min)

Sales by product

\$ Thousands

	<u>Product</u>			
	<i>A</i>	<i>B</i>	<i>C</i>	<i>Total</i>
Jan.	\$88	\$26	\$7	\$121
Feb.	94	30	8	132
Mar.	103	36	8	147
Apr.	113	40	7	160
May	122	40	13	175

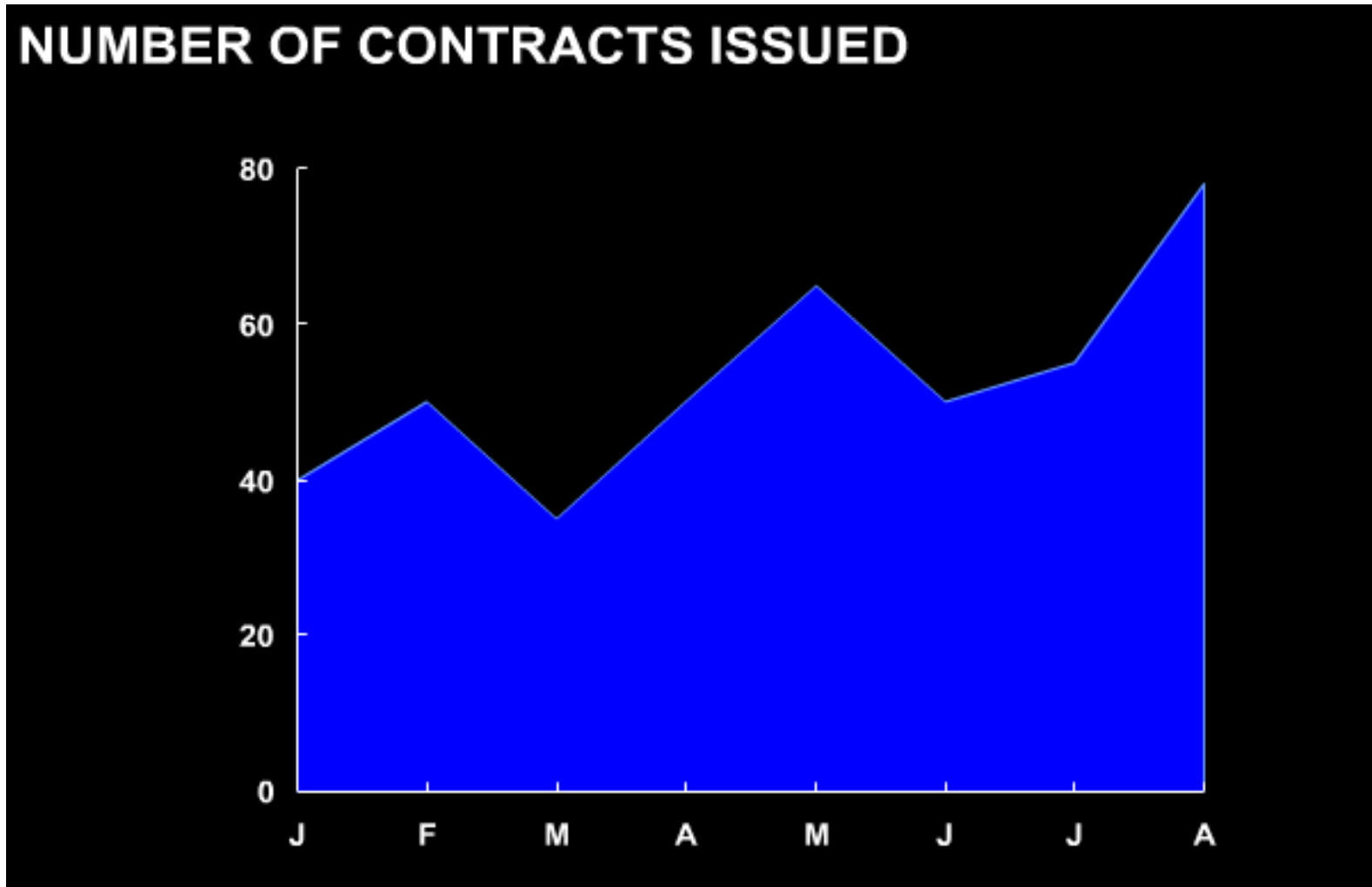
ANSWERS

1. Trend between Jan and May: Sales increase Jan to May continuously
2. Single point in time: In May, product A is much larger than B and C by a large margin

No one can help you with this step. It all depends on what your message is

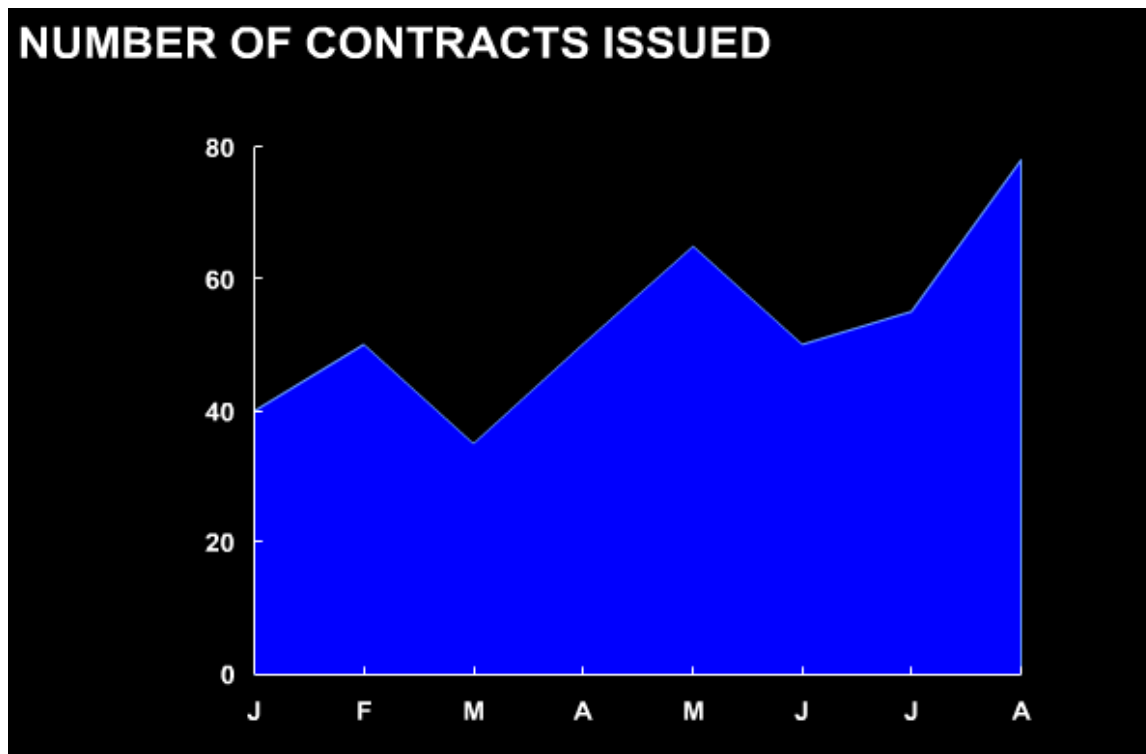
EXERCISE: WRITE DOWN THE MESSAGE YOU THINK THE CHART IS CONVEYING

Write down the answers on your own (5 min)



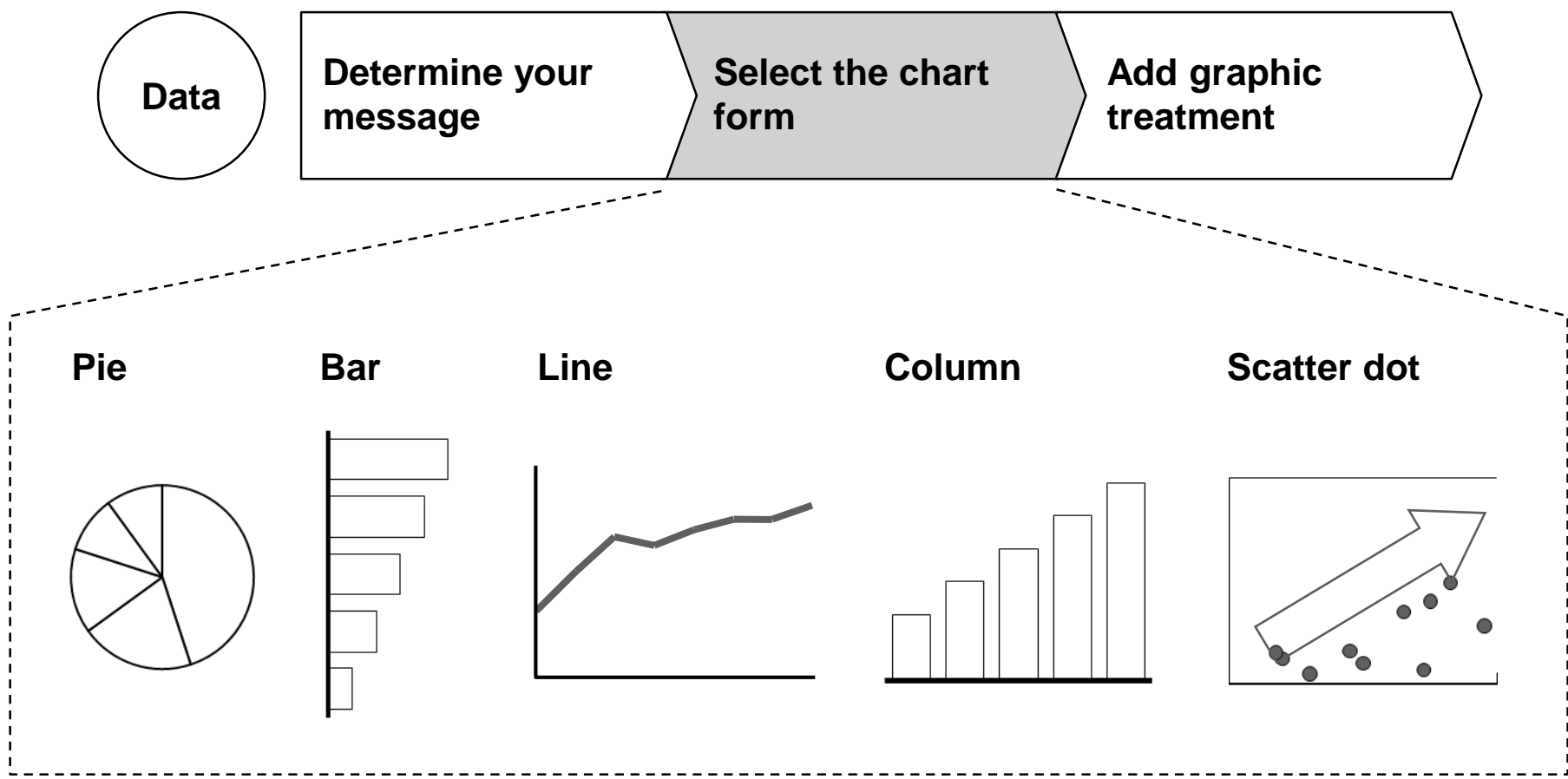
ANSWER

Topical title runs the risk of miscommunicating the point we are trying to make. Take responsibility of the message you want to make and let that be the title of the chart



1. Increased
2. Fluctuated
3. Others?

STEP 2: SELECT THE CHART FORM



MESSAGES LEAD TO ONE OF FIVE BASIC KINDS OF COMPARISON

	Comparison	Example
Component	Size of each part as percentage of total	In May, product A accounted for the largest share of the total
Item	Ranking of items (equal, more/less than other)	In May, sales for product A exceeded those of products B and C
Time series	Changes over time (trends in weeks, months, years; increase, decrease, constant)	Sales have risen steadily since January
Frequency distribution	Number of items within a progressive numerical range	In May, most sales were in the USD1,000 to USD2,000 range
Correlation	Relationship between two variables	Sales performance in May shows no relationship between sales and salesperson's experience

IDENTIFY THE COMPARISON IMPLIED FROM THESE MESSAGES

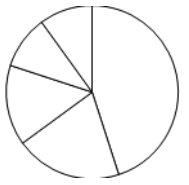
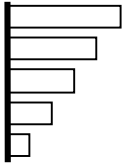
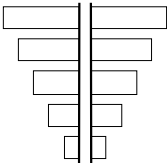
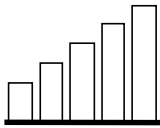
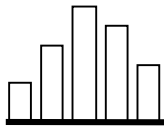
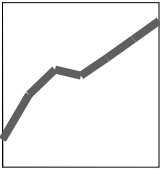
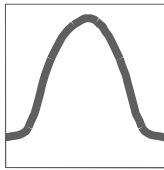
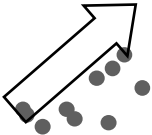
Message	Comparison
Sales are forecast to increase between now and 2012	Time series
Higher price of gasoline brands does not indicate better performance	Correlation
In March, the turnover rates for the five divisions were about the same	Item
The sales manager spends only 15% of his time in the field	Component
The largest number of employees earns between \$35,000 and \$40,000	Frequency distribution

IDENTIFY THE COMPARISON IMPLIED FROM THESE MESSAGES

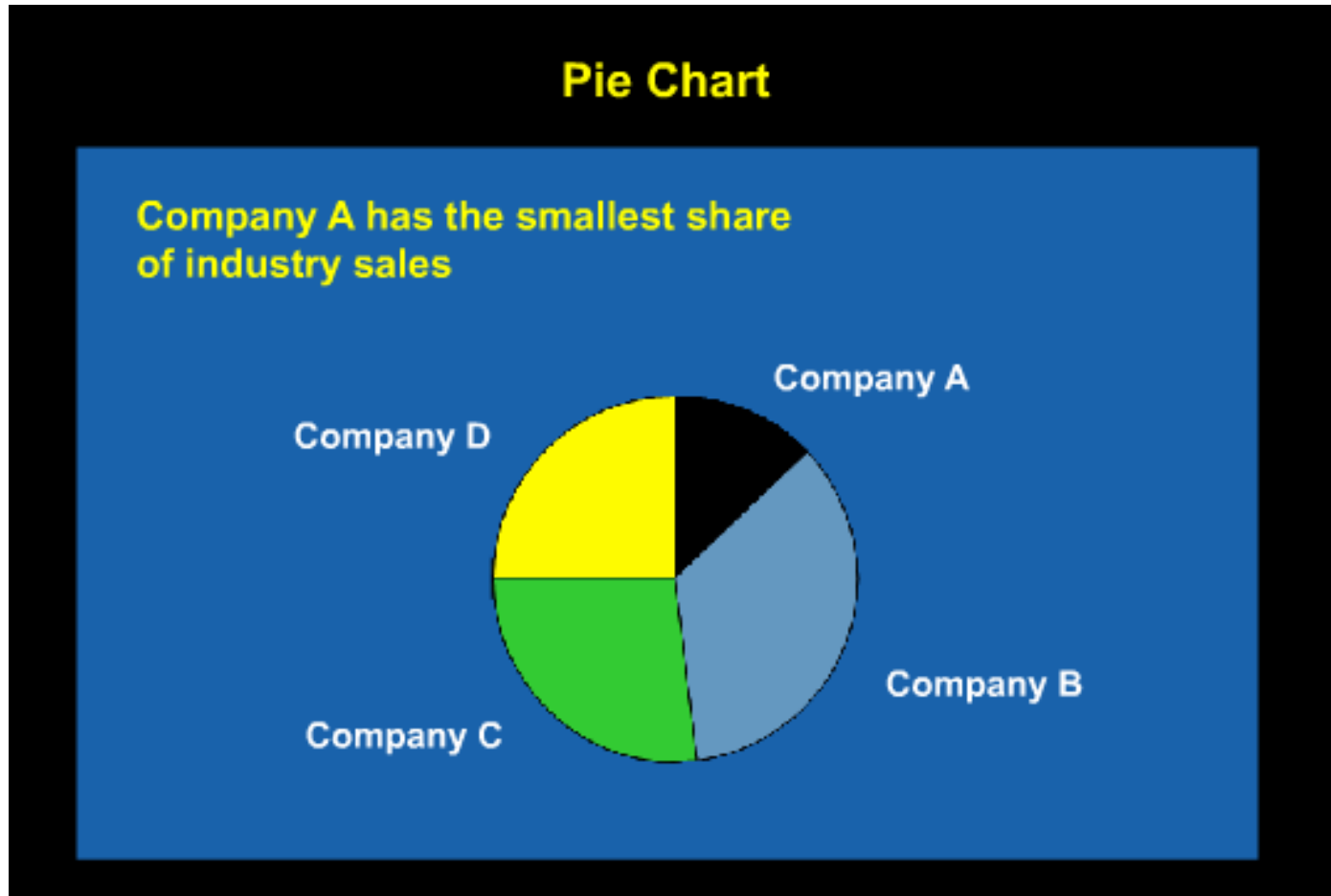
Message	Comparison
The majority of shipments are delivered in 5 to 6 days	Frequency distribution
In May, product A accounted for the largest share of total company sales	Component
Sales has risen steadily since January	Time series
In May, product A exceeded those of products B and C	Item
Discount per ton has no relationship to number of tons bought	Correlation

EACH CHART IS BEST EQUIPPED TO SHOW A PARTICULAR COMPARISON

Kind of comparison

		Kind of comparison				
		Component	Item	Time series	Frequency distribution	Correlation
Type of chart	Pie					
	Bar					
	Column					
	Line					
	Dot					

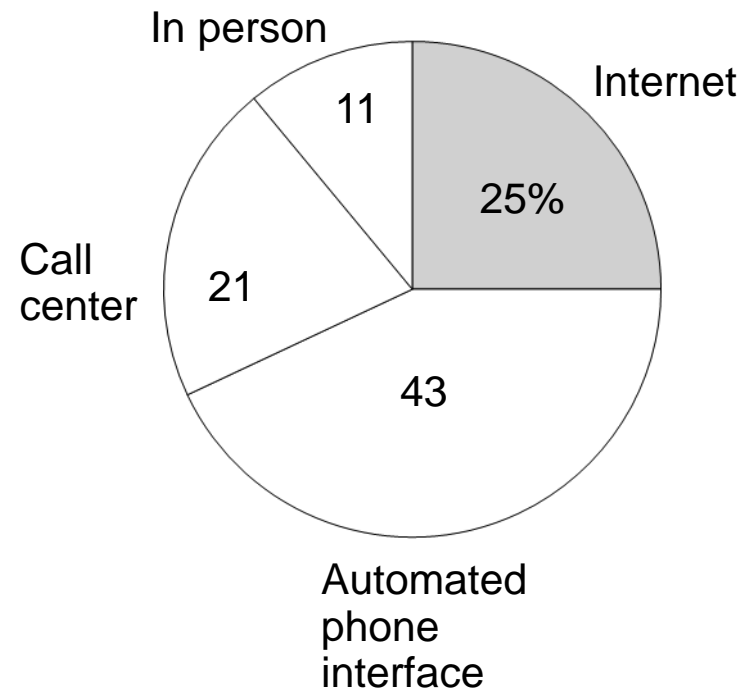
PIE CHART CAN MOST EASILY SHOW WHICH IS THE MOST IMPORTANT COMPONENT



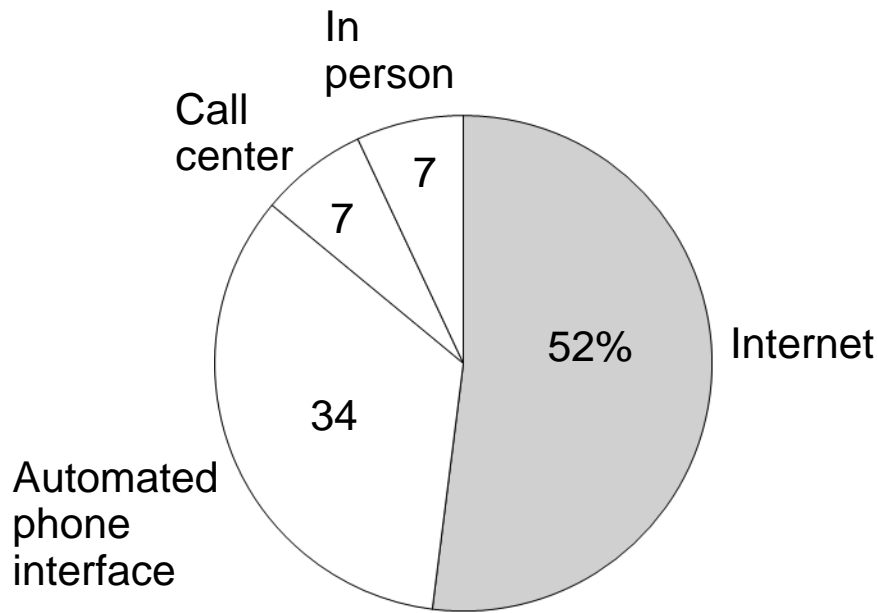
EXAMPLE: INTERNET PROJECTED TO ACCOUNT FOR LARGEST SHARE OF INTERACTIONS

Millions of interactions, percent

Now
22 million

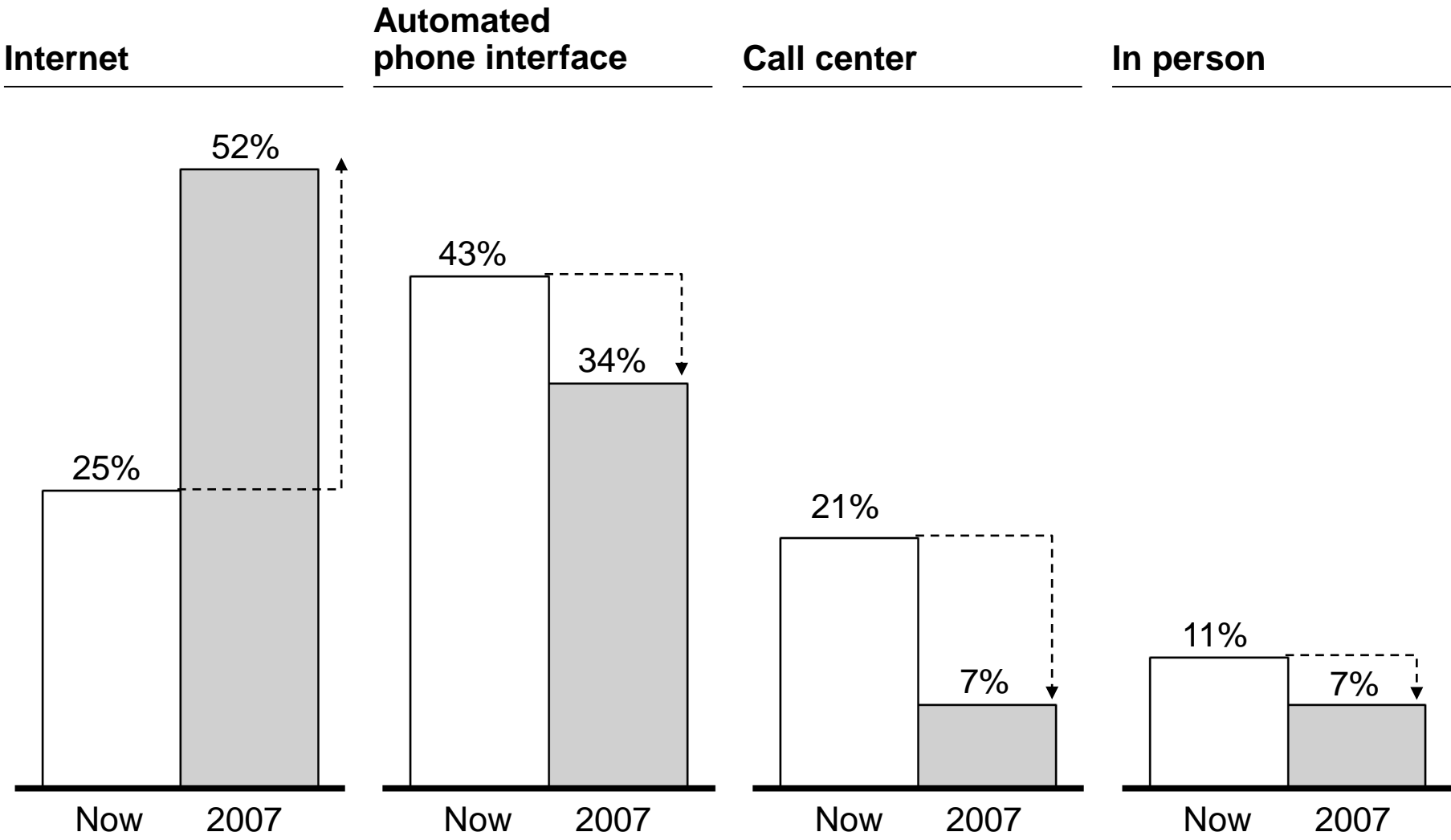


2007
27 million



BY 2007, INTERNET'S SHARE OF INTERACTIONS WILL DOUBLE WHILE SHARES OF OTHER CHANNELS DECLINE

Percent of interactions



Source: Pioneer marketing dept.; Team analysis

BAR CHARTS ARE BEST USED TO RANK OR COMPARE

Bar Chart

Clients return on sales rank fourth

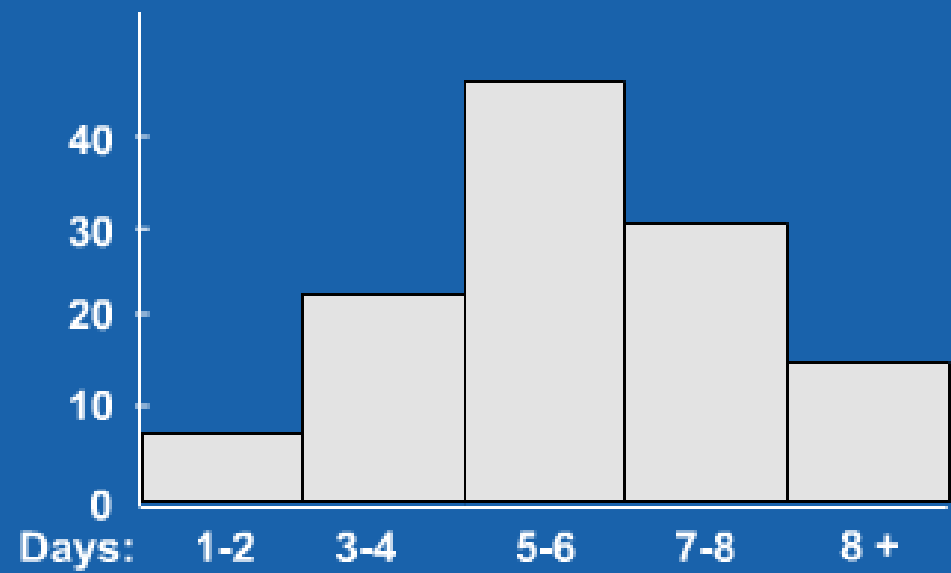


FREQUENCY DISTRIBUTION

Step Column Chart

The majority of shipments are received in 5 to 6 days

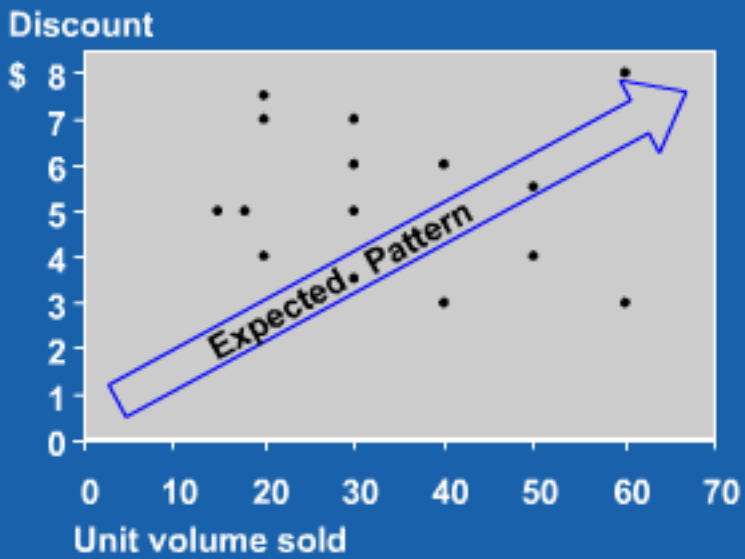
Number of orders



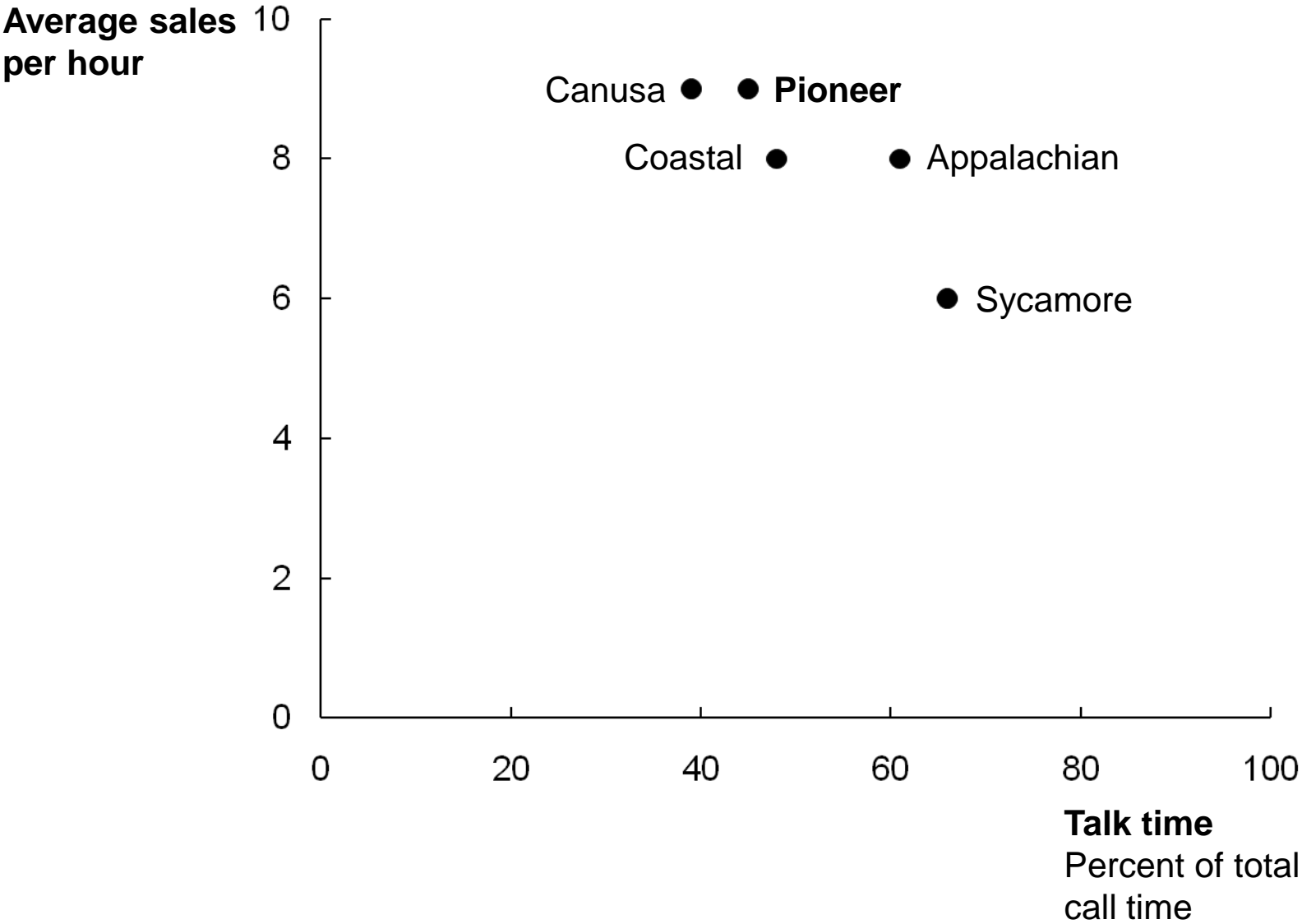
DOT CHART EXAMPLE - NO CORRELATION BETWEEN UNITS SOLD VS DISCOUNT

Dot Chart

There is no relationship between discount and volume sold

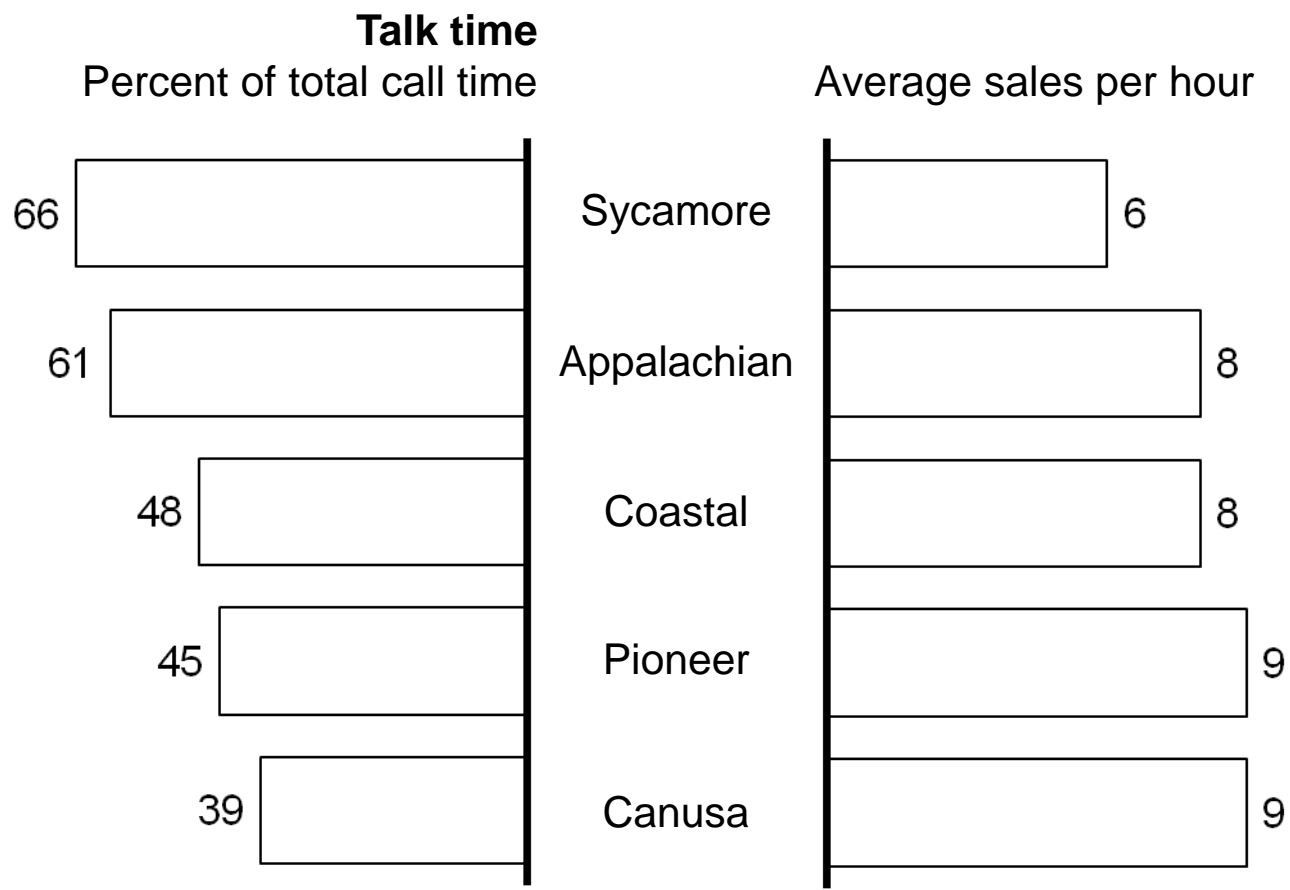


EXAMPLE: SHORTER TALK TIME MAY PRODUCE MORE SALES



EXAMPLE: SHORTER TALK TIME LINKS TO HIGHER SALES

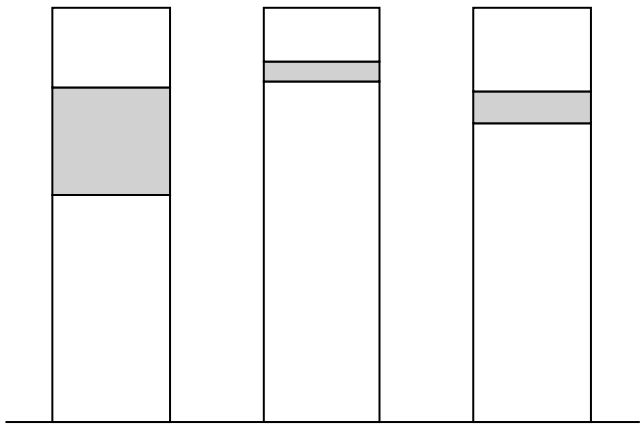
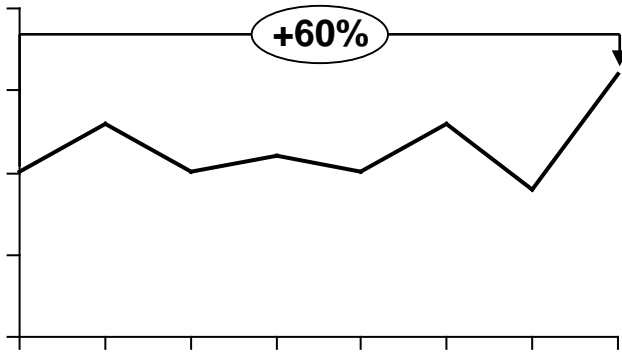
Should see a mirror image if there is correlation. Use bar chart if less data points, and use dot chart if many data points



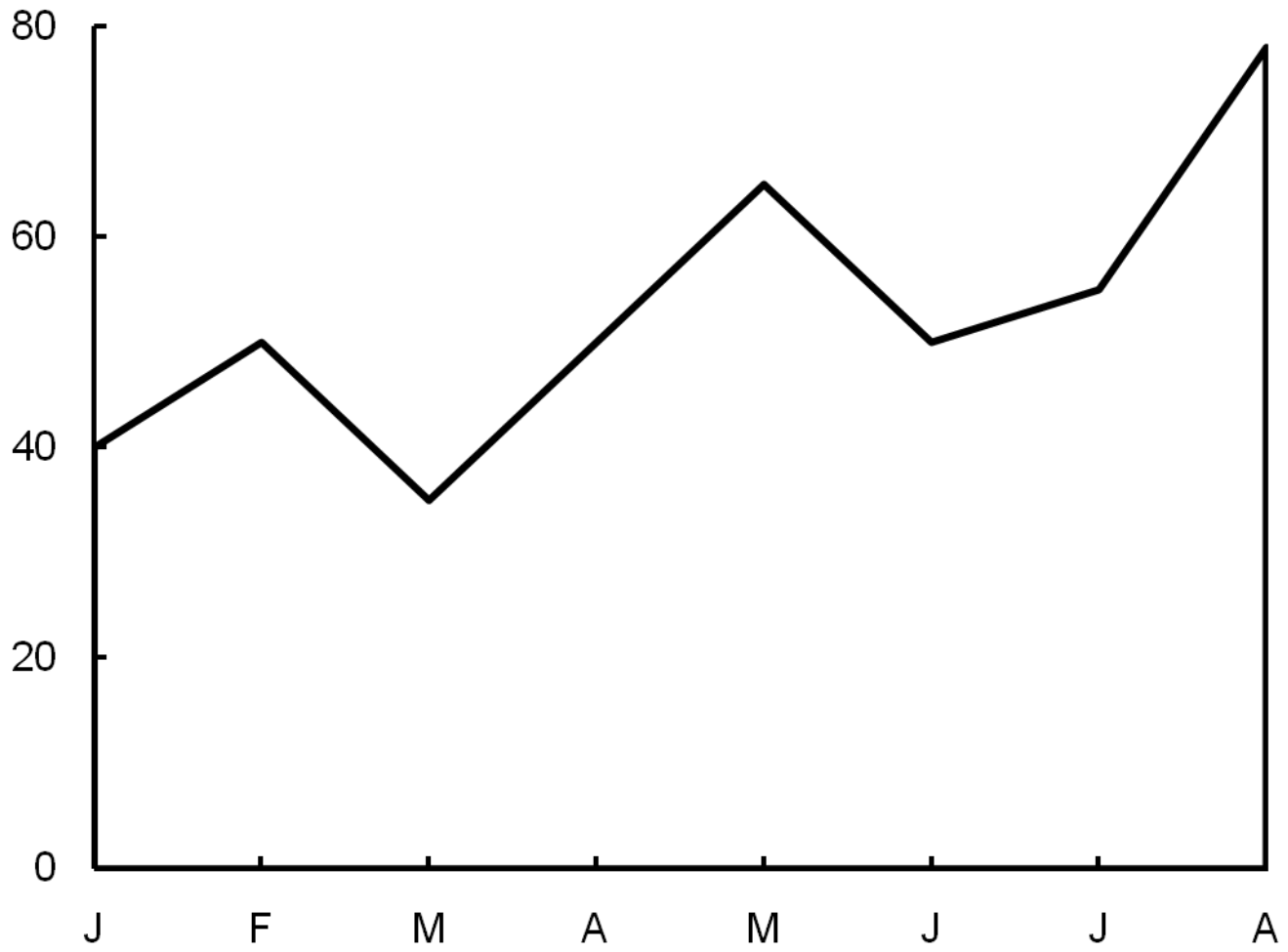
IDENTIFY THE COMPARISON AND CHART FORM BEST SUITED

Message	Comparison	Chart form
Sales are forecast to increase over the next ten years	Time series	Line chart due to over 7 data points
Higher price of 9 gasoline brands does not indicate better vehicle performance	Correlation	Scatter dot chart better due to large number of data points
Last year, most turnover was in 30 to 35 age group	Frequency distribution	Column chart due to less data points
Region C ranks last in productivity	Item	Bar chart
The largest share of funds is allocated to manufacturing	Component	Pie chart
There is a relationship between profitability and compensation for companies A, B, C, D, E	Correlation	Mirror bars

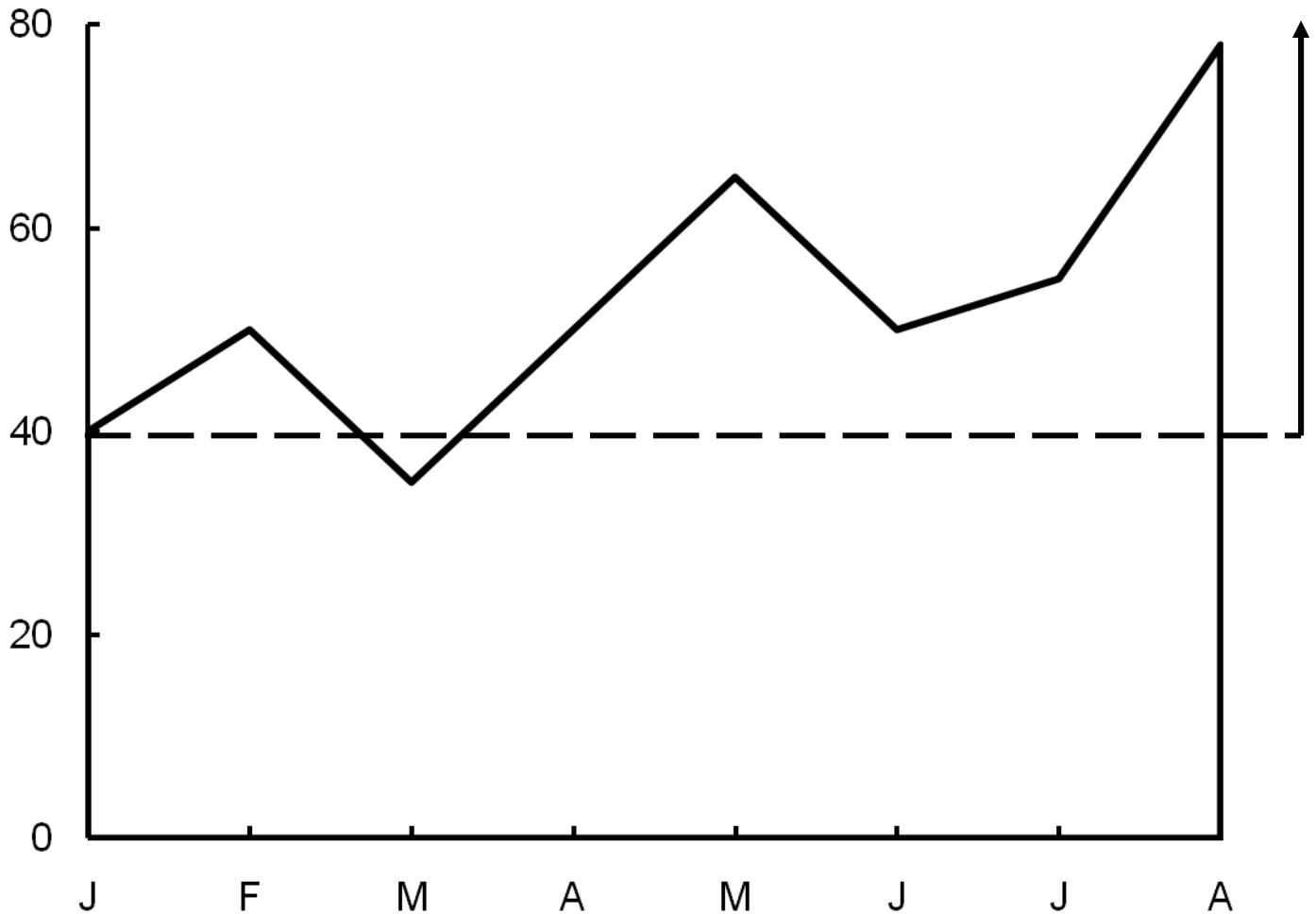
STEP 3: ADD GRAPHIC TREATMENT



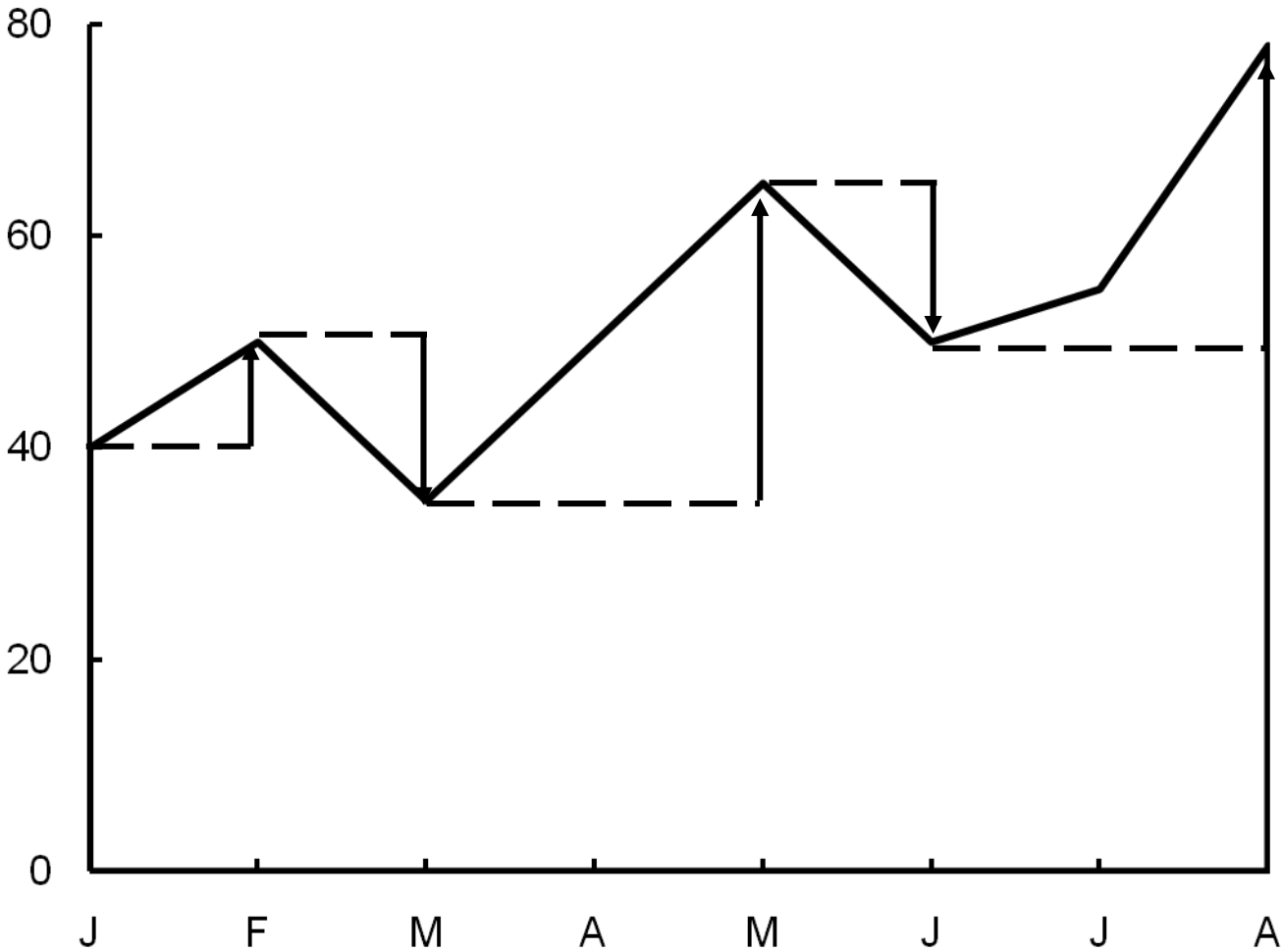
ONE SET OF DATA CAN HAVE MULTIPLE MESSAGES - NUMBER OF CONTRACTS ISSUED



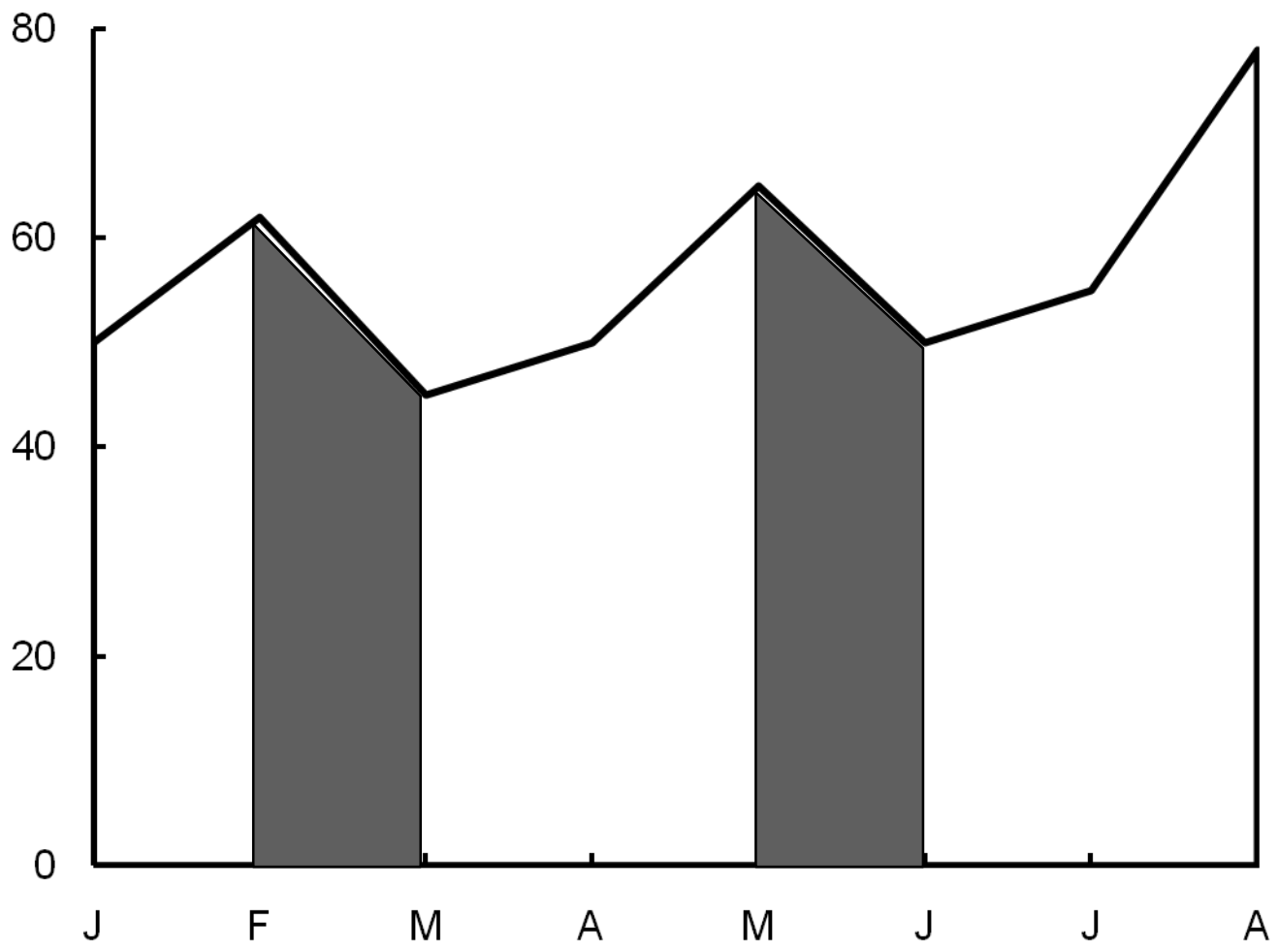
POSSIBLE ANSWER 1: NUMBER OF CONTRACTS ISSUED HAS INCREASED SINCE JANUARY



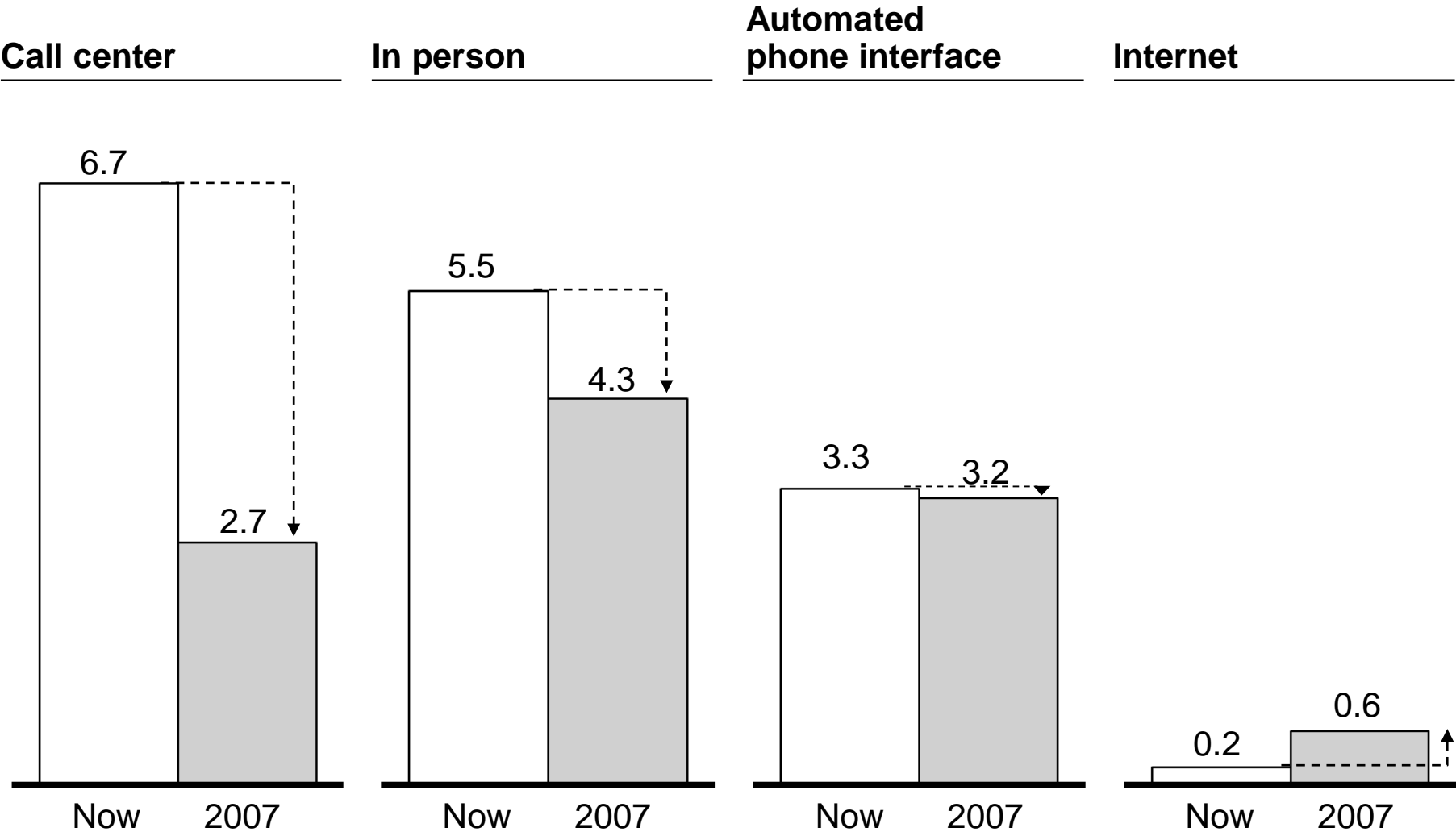
**POSSIBLE ANSWER 2: NUMBER OF CONTRACTS ISSUED HAS
FLUCTUATED**



POSSIBLE ANSWER 3: NUMBER OF CONTRACTS ISSUED DECLINED IN 2 OF THE 8 MONTHS



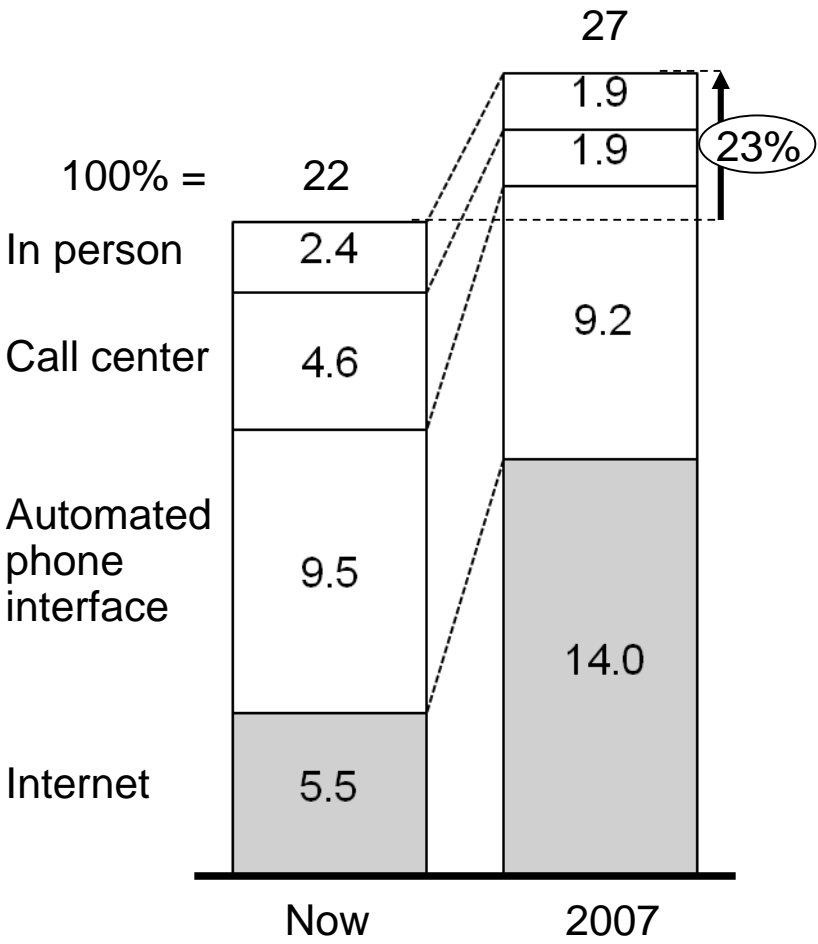
EXAMPLE: COST SAVINGS WILL BE ACHIEVED IN 3 OF THE 4 CHANNELS
USD Millions



EXAMPLE: IN SPITE OF INCREASED INTERACTIONS, SALES COSTS WILL DECREASE BY 31%

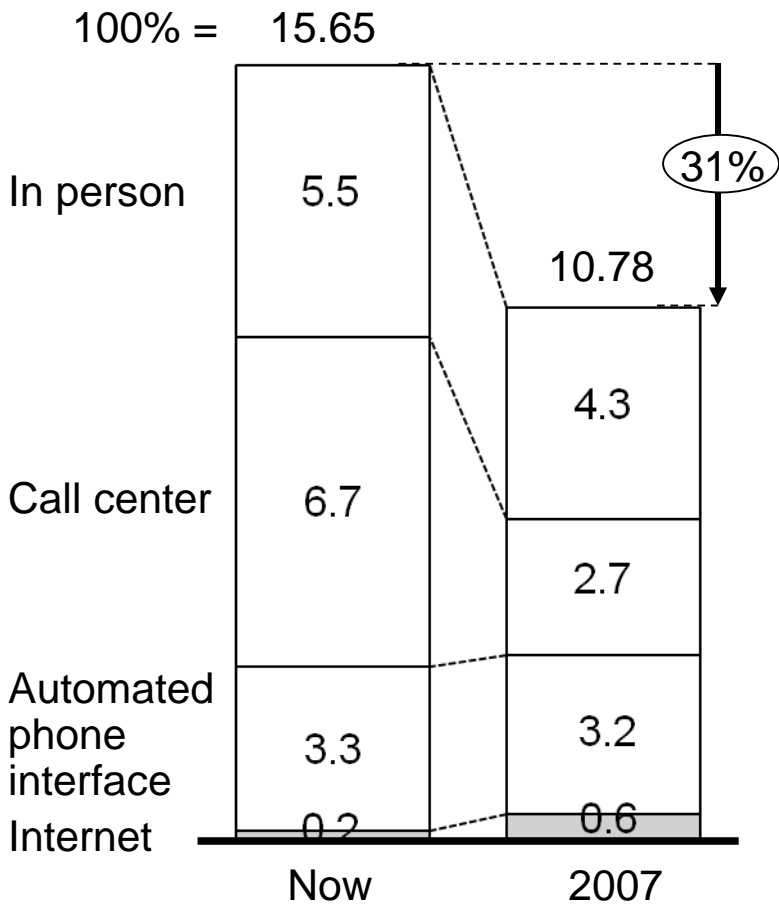
Number of interactions

Millions



Sales costs

USD Millions



HOW TO DESIGN SUCCESSFUL EXHIBITS

- Quantitative

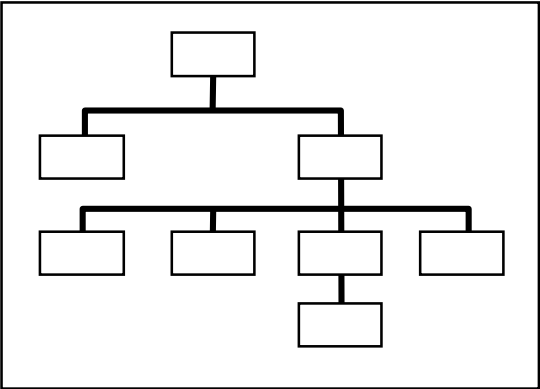
- **Non-quantitative**

- **Concept visuals**

- Text visuals

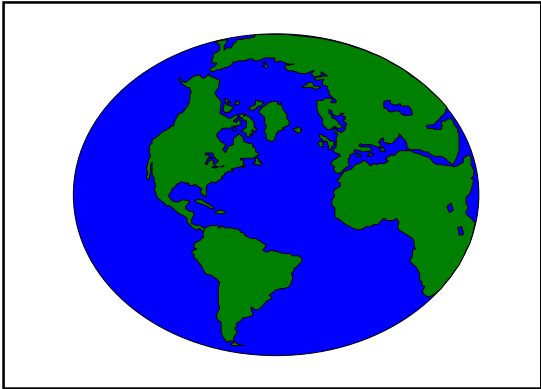
EXAMPLE CONCEPT VISUALS

Who?



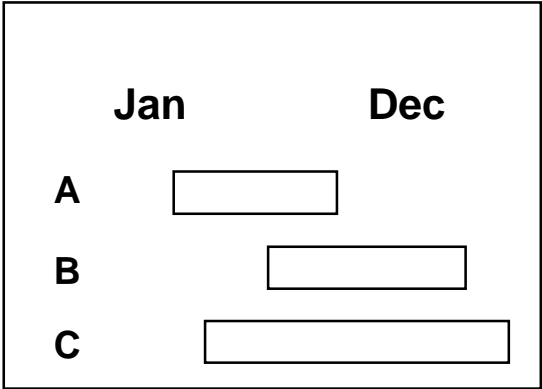
Organization

Where?



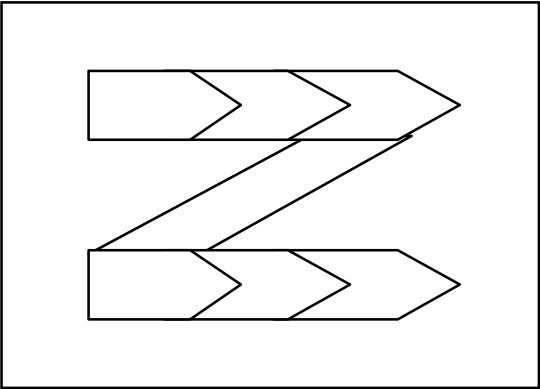
Map

When?

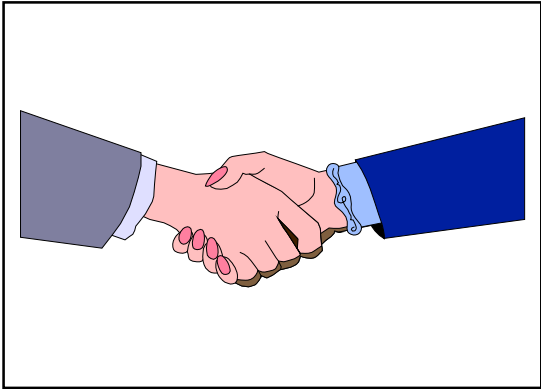


Gantt

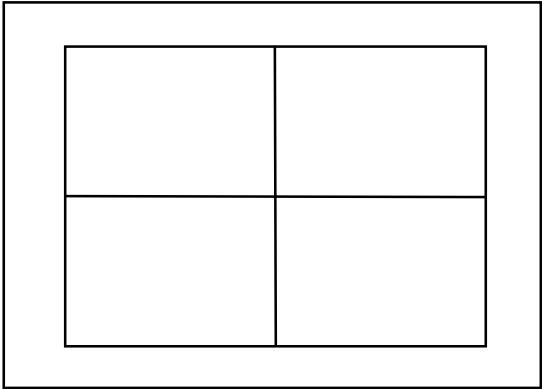
How?



Flow/process

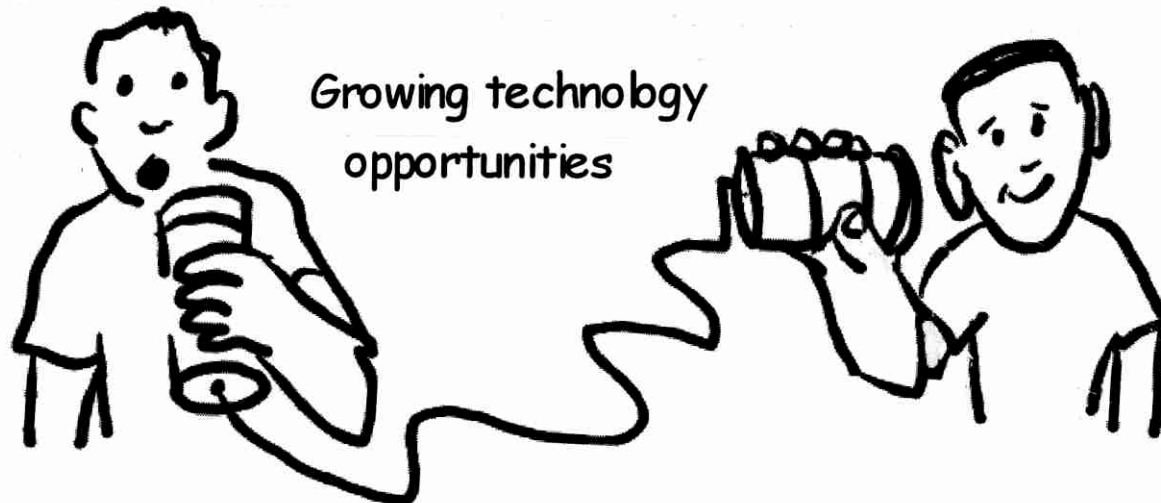
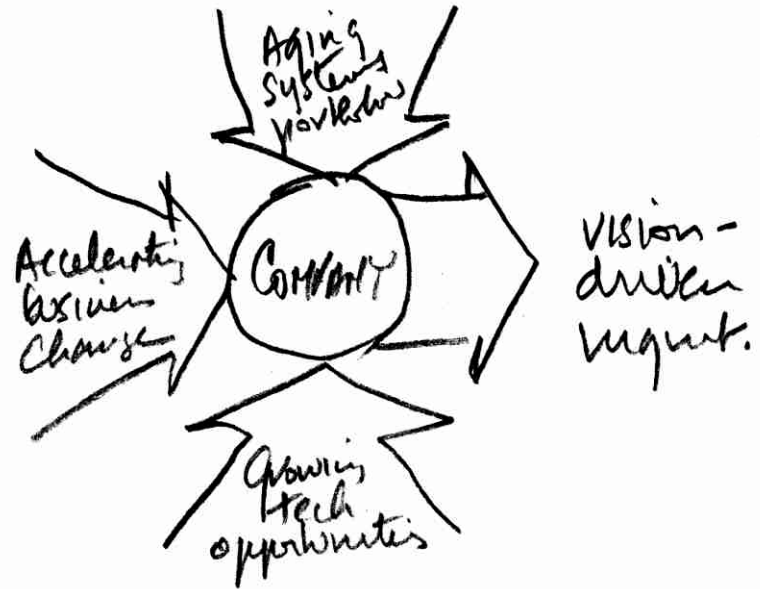
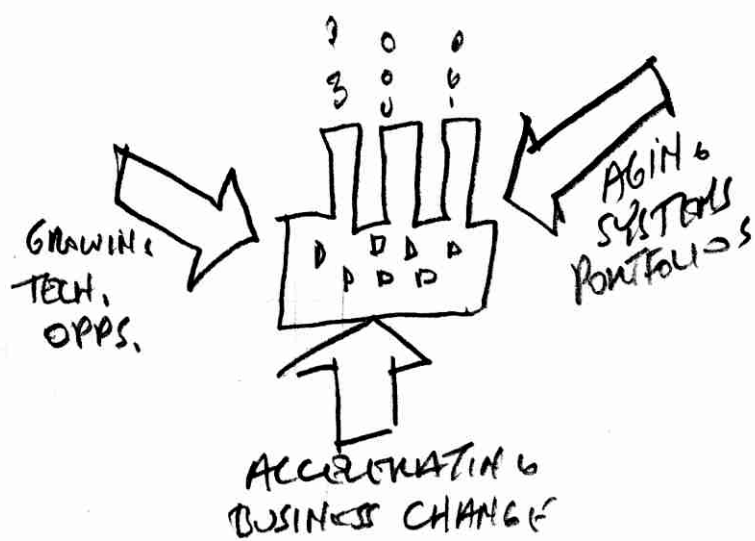


Concept

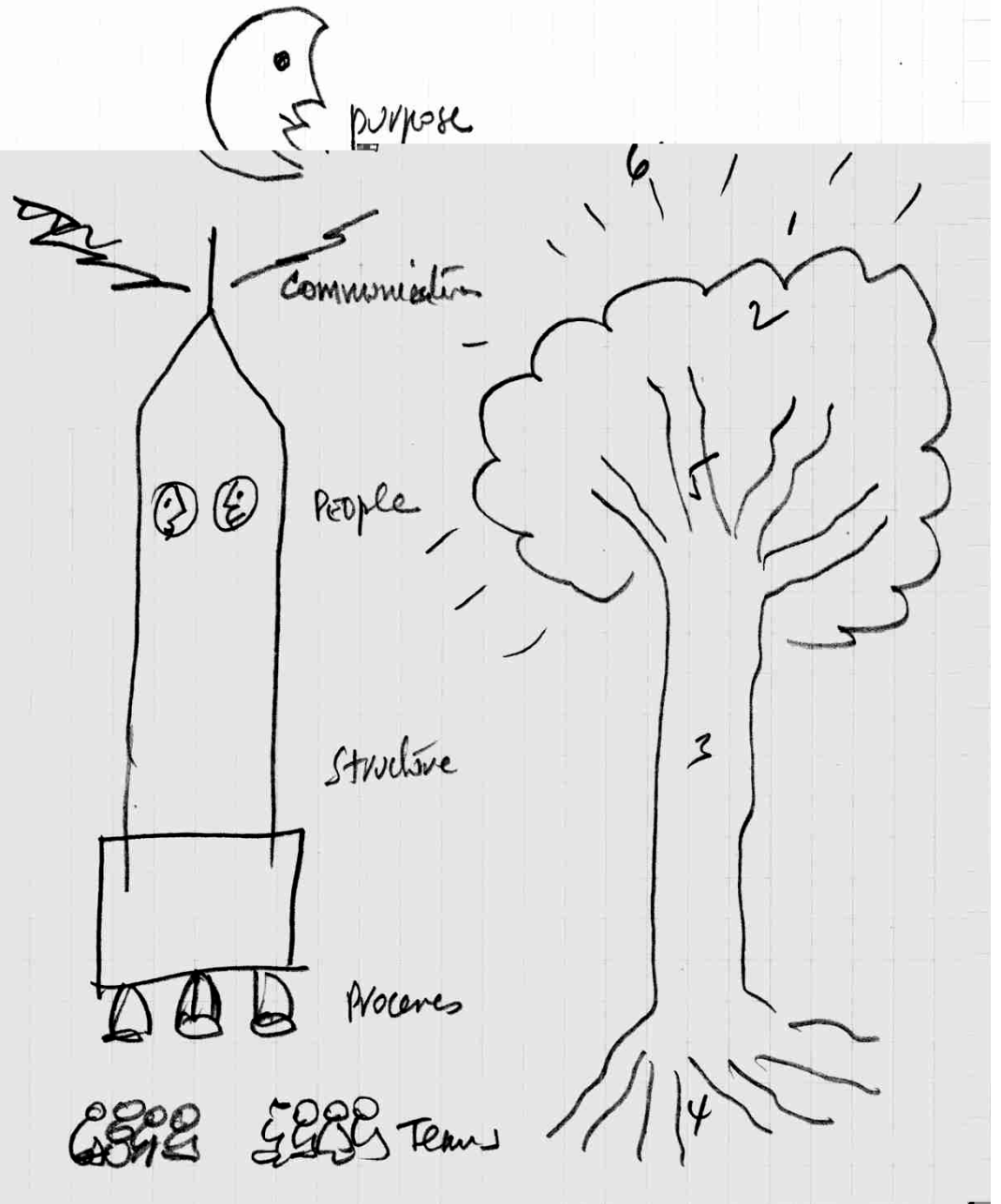
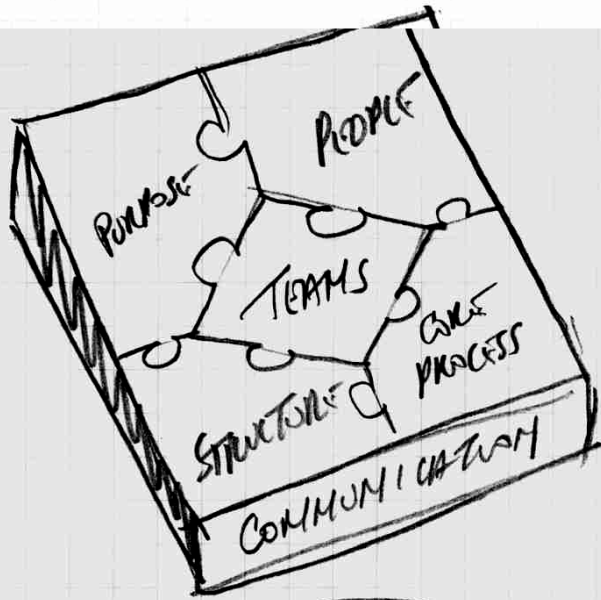


Matrix

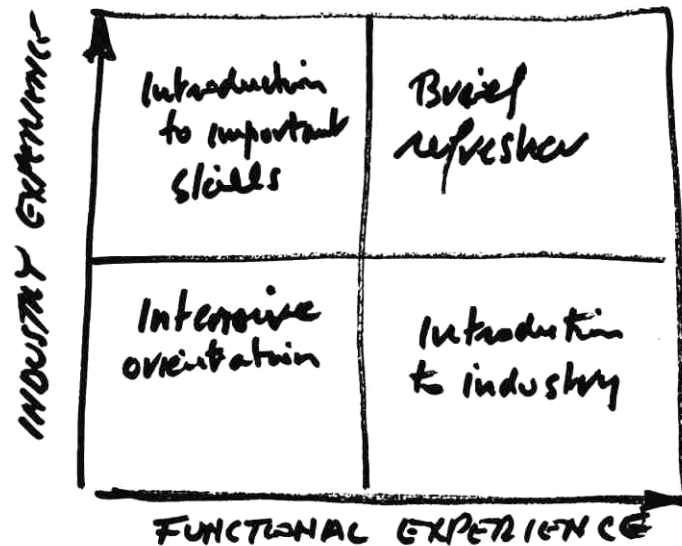
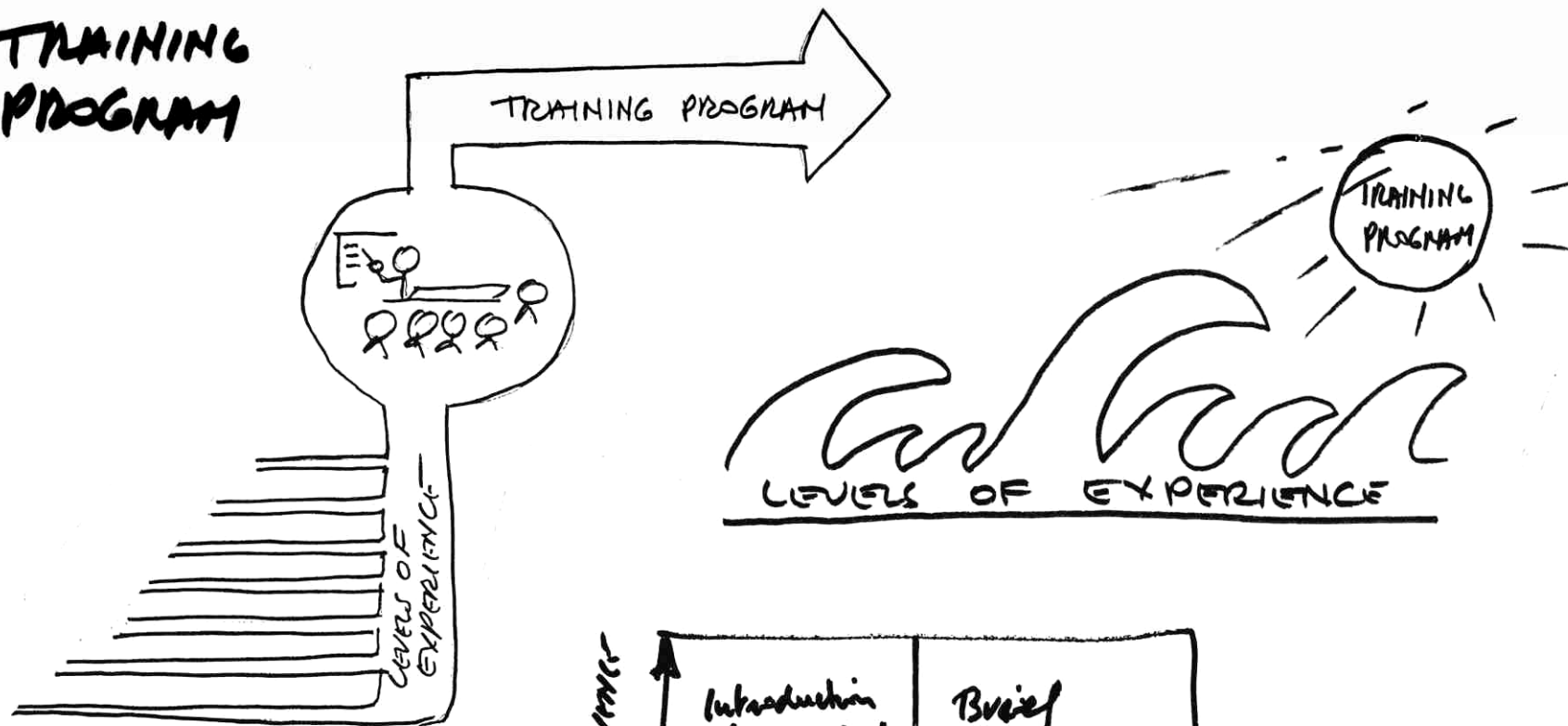
A. FORCES AT WORK



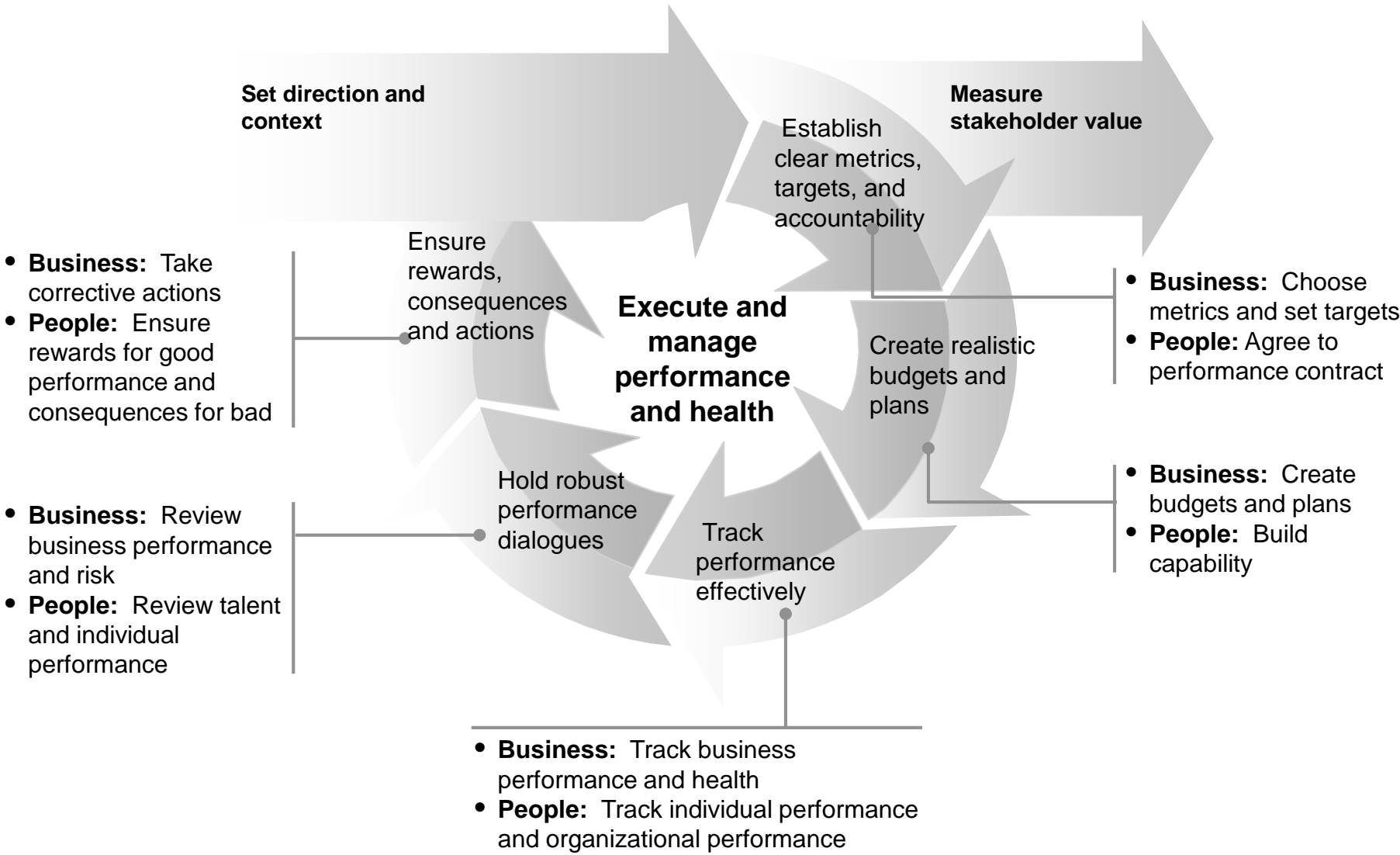
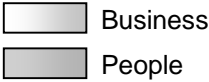
B. HPO



C. TRAINING PROGRAM



EXAMPLE



EXERCISE

Sketch as many charts that convey the following message:

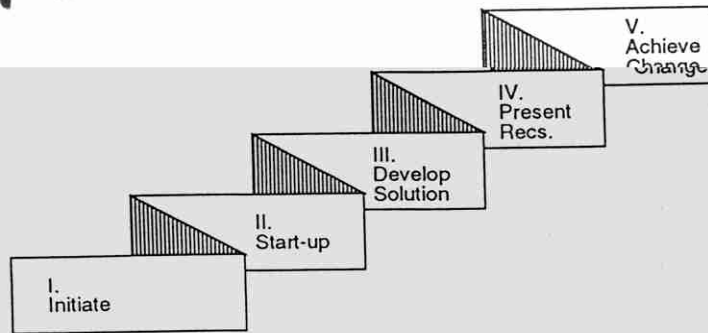
A project goes through five phases

1. Initiate
2. Start up
3. Develop solution
4. Present recommendation
5. Achieve change

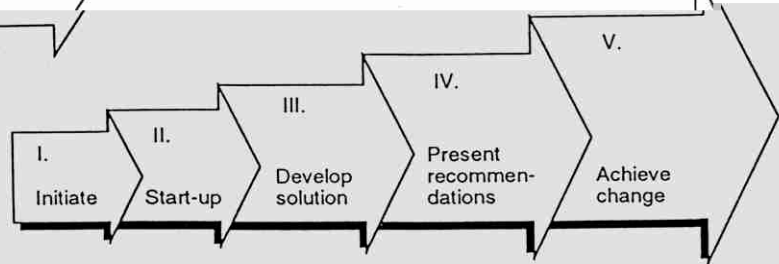
EXERCISE - ANSWERS

D. STUDIES GO THROUGH 5 PHASES

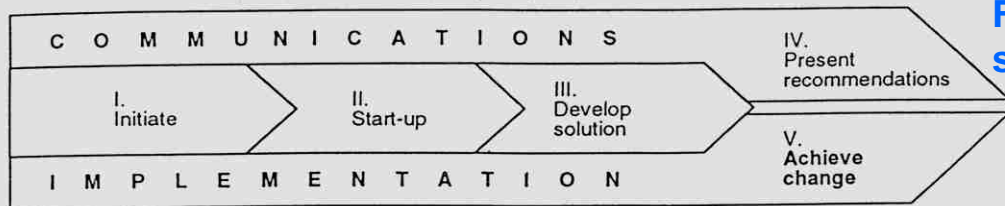
Each builds on previous phase



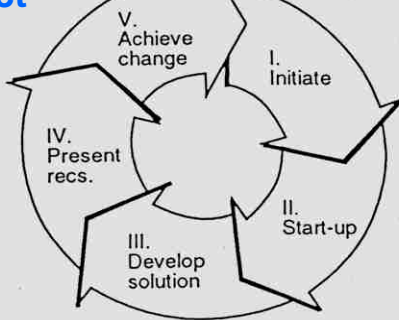
Upward flow



First 3 steps sequential



Every project generate another project



Roadblocks



Initiate Study



Start-up



Develop Solution



Present Recommendations



Achieve Change

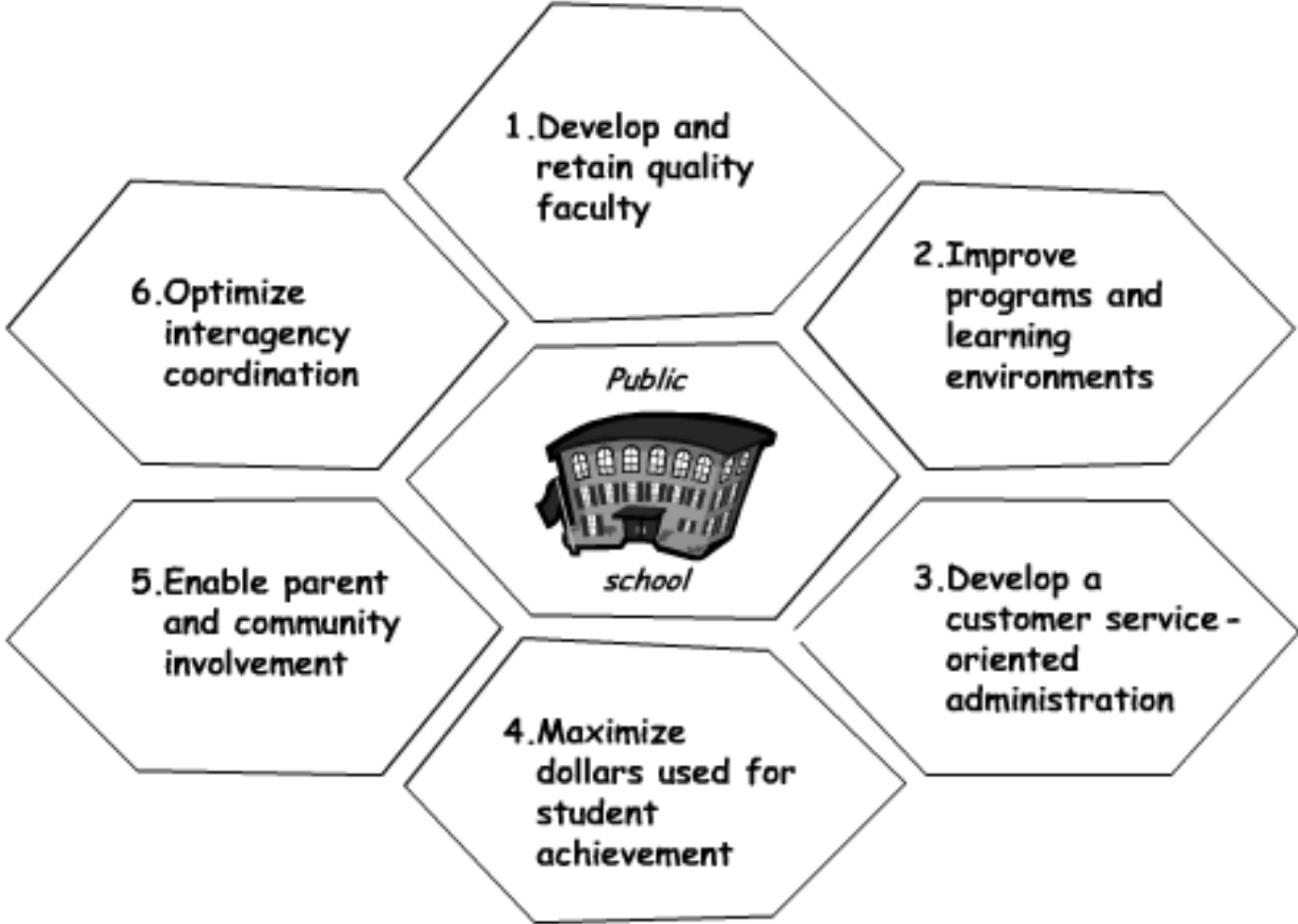
EXERCISE

Sketch as many charts that convey the following messages

Getting the basics right for public school

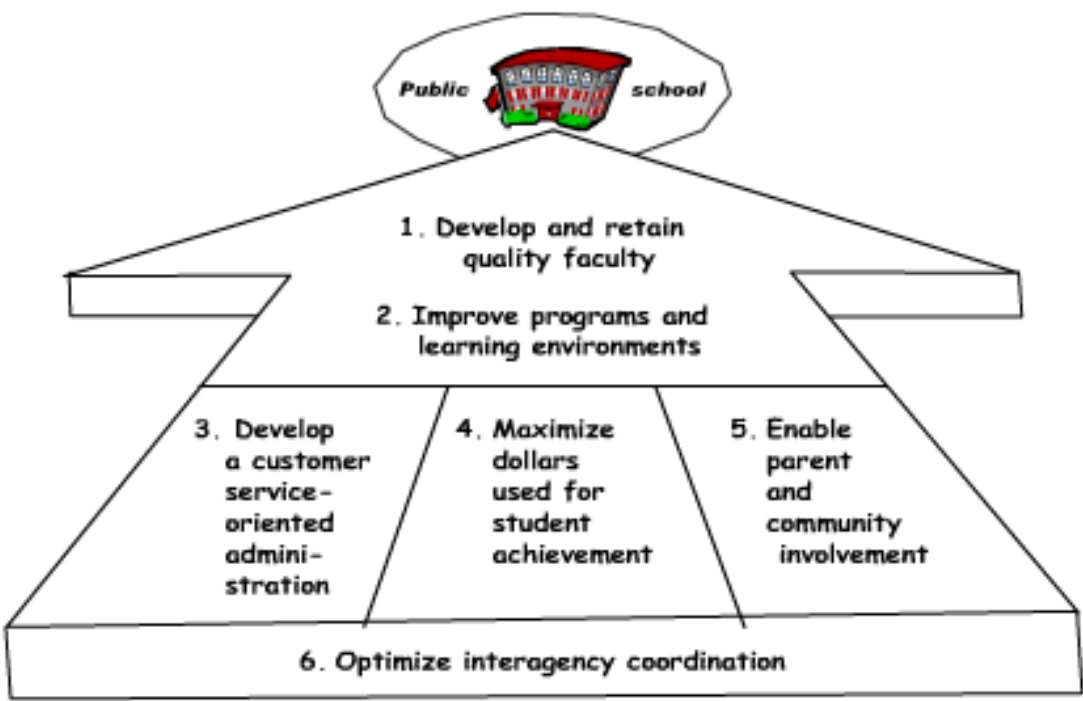
- Develop and retain quality faculty
- Improve programs and learning environments
- Develop a customer service oriented administration
- Maximize dollar used for student achievement
- Enable parent and community involvement
- Optimize interagency coordination

ANSWERS



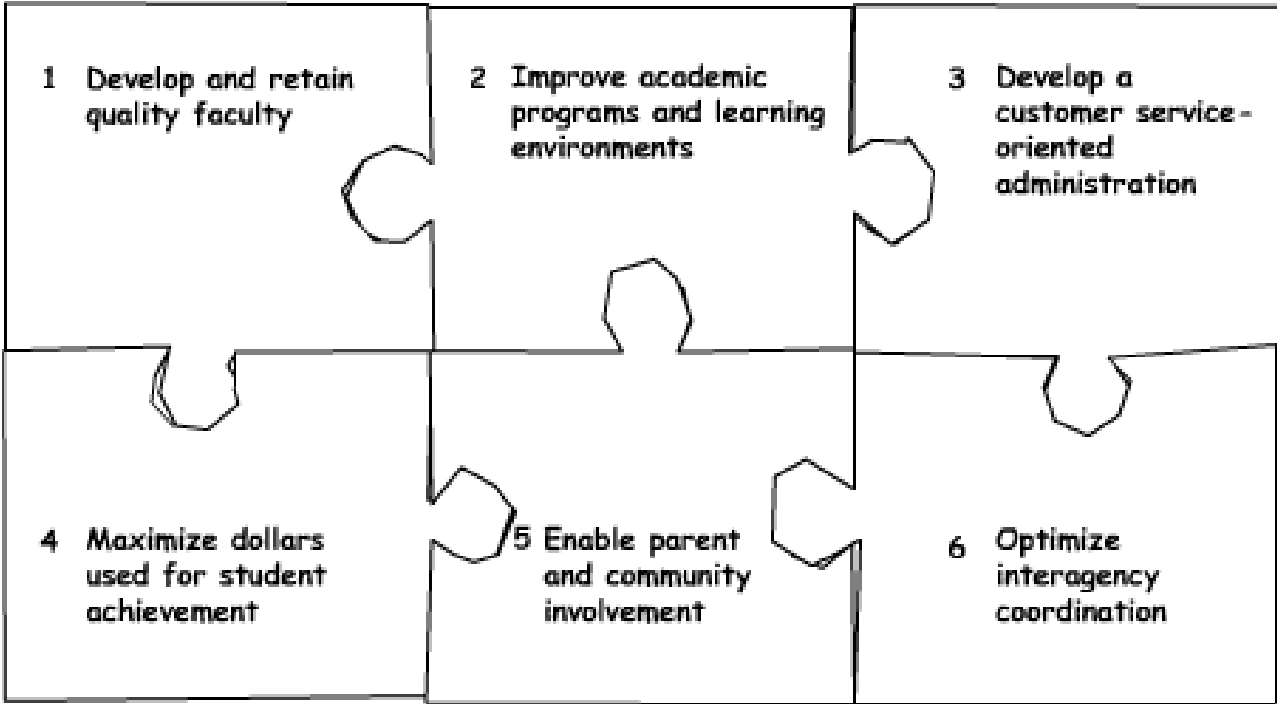
ANSWERS

GETTING THE BASICS RIGHT FOR PUBLIC SCHOOL



ANSWERS

GETTING THE BASICS RIGHT FOR PUBLIC SCHOOL



ANSWERS

GETTING THE BASICS RIGHT FOR PUBLIC SCHOOL

PS REPORT CARD

- ☒ 1 Develop and retain quality faculty
- ☒ 2 Improve programs and learning environments
- ☒ 3 Develop a customer service-oriented administration
- ☒ 4 Maximize dollars used for student achievement
- ☒ 5 Enable parent and community involvement
- ☒ 6 Optimize interagency coordination

HOW TO DESIGN SUCCESSFUL EXHIBITS

- Quantitative
- **Non-quantitative**
 - Concept visuals
 - **Text visuals**

READING WORD FOR WORD FROM PRESENTATION DOESN'T WORK



Don't read to the audience what they can read for themselves. Can be quiet, but hard to know how long to wait.

MAJOR WEAKNESSES IN THE CURRENT ORGANIZATION

Stocks and Bond's present management structure has several important deficiencies that should be corrected in any substantial realignment of responsibilities

- There is no single recognized head of the firm such as a Management Committee, CEO, COO, CFO, etc.
- We have observed that there are no clearly defined lines of authority and responsibility for major activities or geographical locations
- It is possible that a real conflict exists between the production department and the administration (e.g., who determines forecasts?)
- Inadequate "thinking through" of how much autonomy should be granted to regions (or branches) in various phases of the firm's activities – and what authority in each will be exercised by Corporate Headquarters

We will discuss each of these in the following chapters

ORGANIZATION WEAKNESSES

1. No single recognized head of firm
2. No clear authority and responsibility
3. Conflict between production and administration
4. Tension between regional autonomy and corporate authority

EXERCISE: DEVELOP THE SHORT FORM SOLUTION

Exercise: Develop a short form version

THE BANK'S NEW CORPORATE STRATEGY AND ITS IMPACT

The bank's new corporate strategy calls for a substantial shift in business mix and approaches, to deliver superior performance.

- ¶ The bank will shift resources to its most attractive growth businesses: mortgage origination, home equity lending and small business banking. Mortgage servicing and commercial real estate lending are also strategic priorities.
- ¶ The bank's integrated corporate strategy is founded on these strategic priorities, and includes not only a shift in business emphasis, but also fundamental changes in approach within individual business units.
- ¶ By taking these steps, the bank will significantly improve its profitability and growth trajectory (thereby improving market valuation). Executing this strategy will lead to a 15 percent improvement in ROE and a doubling of net income by 2006.

IMPACT OF THE NEW STRATEGY

STRATEGY

- **Shift resources to most attractive growth businesses**
 - Mortgage origination
 - Home equity lending
 - Small business banking
 - Mortgage servicing
 - Commercial real estate lending
- **Change approach within business units**

FINANCIAL IMPACT

- **15% improvement in ROE**
- **Doubling of net income**



**“He still grunts in an annoying monotone, but
excellent use of visual aids.”**