European Bank
for Reconstruction and Development

Financial Modelling for Consulting companies in Armenia

Armenia

30th October – 2nd November2023

Juan Gamecho

Applied Learning

European Bank
for Reconstruction and Development

Administration

- Introductions and audio test
- 2 X 90 minutes sessions
- 9.00am – 12.30pm
- 30 minute break from 10.30am
- Review of technology
- Mute mics
- Videos on please

Applied Learning

Agenda

European Bank
for Reconstruction and Development

I. Introduction

II. Administration

III. Objectives

IV. Course Outline

Course Outline

European Bank
for Reconstruction and Development

- Understand how to apply financial modelling skills and best practices specifically to consulting projects;
- Increase knowledge and skill in employing these best practices across all project management phases from initiating a project through planning, execution, monitoring and control, to closing a project;
- Improve project management, financial planning, financial modelling and control skills via a broad range of financial modelling learning experiences that allow delivery within budget, on time, and while retaining control over engagements;
- Get acquainted and develop tools for project planning and optimization; creating a project budget; assessing and managing project cash flow;
- Get acquainted with different financial models and develop financial modelling skills that can be implemented into practice during the workshop

Applied Learning

Introduction

Juan Gamecho

30 years experience in banking & finance in emerging markets.

- 1991 – 1993. Government of Slovakia and British Conservative Party.
- 1993 – 97 Structured asset finance including shipping finance
- 97 – 99 Corporate Finance and privatisation expertise.
- 99 – 2003 Debt and equity financing and capital restructuring as Principal Banker with EBRD in Romania RO
- 2003 – present – Capital Restructuring Limited, debt and equity financing, corporate finance in CEE and other emerging markets
- HBRD Capital – Debt and Equity finance raise for SMES

20 years training banking executives and internal auditors for professional exams covering Central and Eastern Europe, Egypt, the Middle East and Southern Africa.**Trainer for EBRD's ASB SME Finance since September 2015. Worked with over 800 SMEs since June 2020.**

Introductions and audio test – introductions

- Name and role
- Additional objectives for the course
- What have you learned about your business since March 2020?

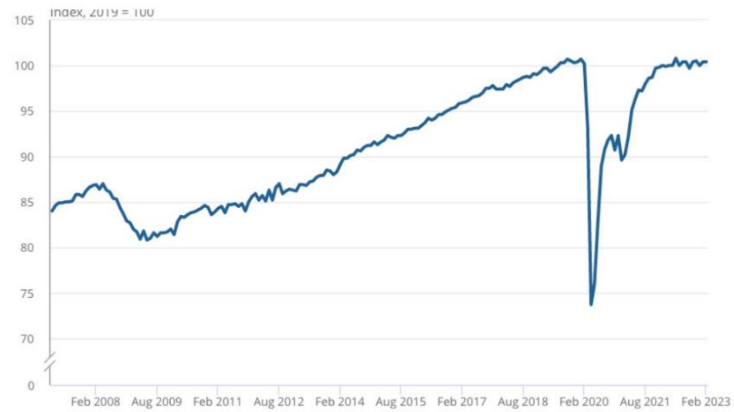
Applied Learning

The current economic and financial climate

The Economic roller coaster and inflation

European Bank
for Reconstruction and Development

UK GDP 2008 – 2023



Source: ONS

- **2020 – 2023 witnessed the greatest 'roller coaster economy' in history**
- Historic contractions in 2020 across the world followed by
- Historic rates of recovery leading to:-
- Surging commodity prices
- Huge increases in energy costs
- Soaring labour rates
- The return of inflation
- ….higher global interest rates
- …..RECESSION
- Financial Crisis….?

Applied Learning

European Bank
for Reconstruction and Development

Applied Learning

Armenia Economic Overview

- https://www.worldbank.org/en/country/armenia/overview#:~:text=Economic%20Outlook,4%25%20in%20the%20medium%20term.

World Bank Outlook

- GDP Growth is expected to ease to 6.6 percent in 2023. Looking ahead to the medium-term, growth is projected to further moderate, averaging 4.3% in 2024-2025. Average inflation is expected to be close to the target of 4% in the medium term.

- Armenia has experienced significant socio-political and economic shocks in recent years. These events have included the 2018 Velvet Revolution, the 2020 twin shocks of the COVID-19 pandemic and the conflict with Azerbaijan, and more than 100,000 ethnic Armenians fleeing into the territory of Armenia in 2023.

- Despite these challenges, the economy has continued to demonstrate resilience, which can be attributed to prudent macroeconomic policies, including active inflation targeting, adherence to fiscal responsibility, and effective oversight of the financial sector.

- In the last five years, Armenia has made substantial development gains. In March 2023, Armenia became an IDA donor, only nine years after graduating from being an IDA recipient itself and four years after attaining upper-middle income (MIC) country status.

Continuing challenges for Armenia in 2023/24

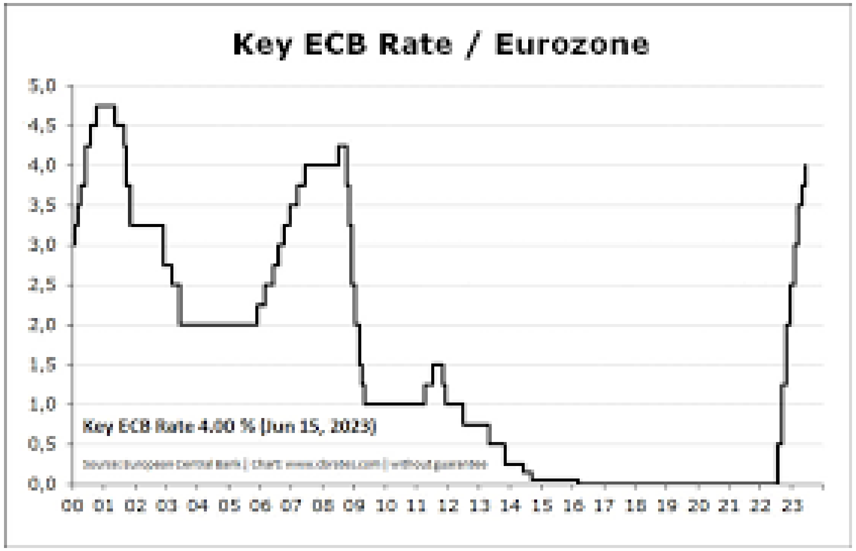
European Bank
for Reconstruction and Development

- **War in Ukraine and Middle East-overspill**
- **Conflict with Azerbaijan**
- Surging inflation and Central Banks being late to react
- Money supply contraction and impact on global economy?
- Global Recession for how long?
- Deflation in China and real estate bubble bursting
- Consumer demand contracting
- Rising NPLs in Europe and globally…

Applied Learning

Largest rise in global interest rates in 40 years

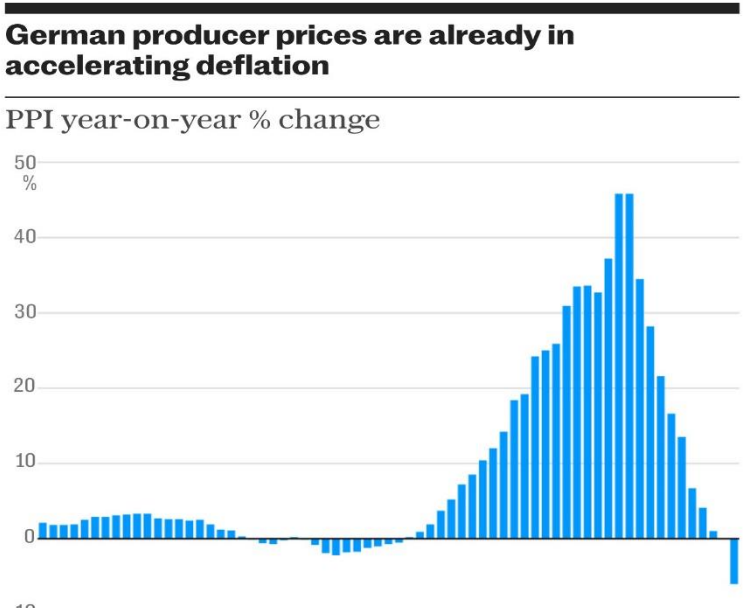
European Bank
for Reconstruction and Development



- Since early 2022 central banks in the US, Eurozone and UK have increased interest rates by the fastest amount since the 1980s in order to crush inflation.
- This is having a huge impact on debt service obligations of companies, sovereigns and households alike
- Further interest rates increases are predicted in the face of still relatively high inflation…however……

Applied Learning

Contacting producer prices and PMI in the Eurozone



- The Eurozone is experiencing a contraction in producer prices and in the purchasing manager's index both leading EWS of a coming recession.
- Germany, the EU's largest economy is again in recession.

Applied Learning

Continued weakness and high indebtedness in sectors hit by the Covid lockdowns

European Bank
for Reconstruction and Development

Hardest hit

- Service industries, particularly:
- Hotels
- Restaurants
- Transportation
- Automotive (car manufacturers)
- Basic metals and
- Textiles

Lightest hit

- Communication services
- Food and Beverage
- Pharmaceuticals
- IT, Computers and electronics

Financial, Cost and Budget Modelling for Consultants

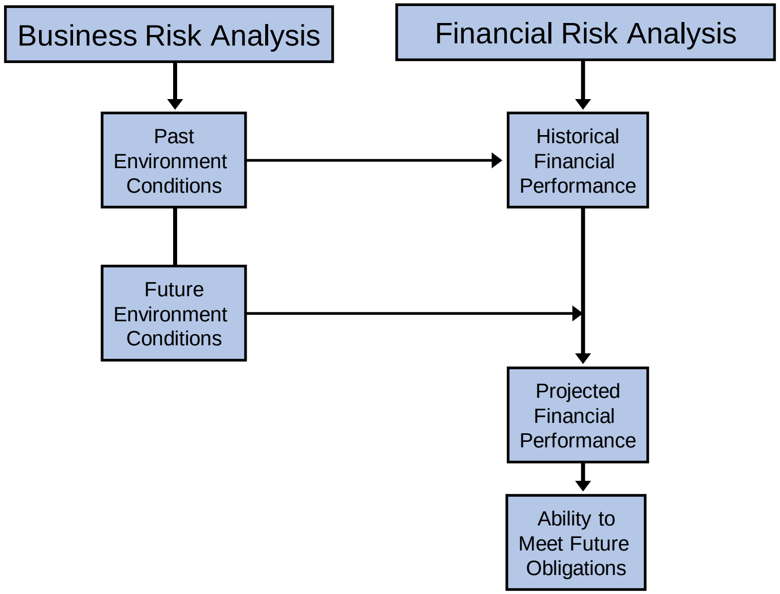
The importance of financial modelling for financial control

European Bank
for Reconstruction and Development

- Forecasting is an essential part of budgeting and costing.
- The use of financial models allows us to understand the impact of changes in pricing and costs as well as the impact of risk crystallization on the performance of clients as well as on our own consultancy companies
- Financial modelling is however a powerful tool that we must use carefully. Any changes in levels of activity or costing and pricing must be done based on solid assumptions.
- This is also requires a careful analysis of how we seen the future business environment and its potential impact on company cash flows and financial performance.

Applied Learning

In order to forecast financial performance, we need to anticipate the future business environment



Analysing the business from a holistic approach in order to assess its strategic and financial development

European Bank
for Reconstruction and Development

Mission

- The core strategy of the company
- How It creates strategic vision and implements it successfully
- The creation of Critical success factors and their use in exploiting Market Opportunities.

Management

- **All internal factors including**;
- Management ability, scope and organization and trustworthiness
- Internal business processes and product/service development

Market

- **External analysis focusing on**:
- Strategy
- Industry and client relations
- Growth opportunities

Money

- Key concepts used in assessing the financial performance of a client company
- Review of the financial Analysis included in Credit Risk Assessment
- Assessment of the company's ability to generate **cash flows that are sufficient to repay**

Applied Learning

Creating the Forecasts – information needs (1)

There is an old expression in forecasting "Rubbish In, Rubbish out". In other words. The usefulness of the forecast is only as good as the information we put into it.

Information required to complete a full budget may therefore include:

Sales

Consider

- Trends in volume and pricing
- Economic environment and impact on market
- Competition and competitive pressures
- Change in tastes that can affect the market
- External risk crystallisation and their impact on volumes and pricing

Creating the forecasts – information needs (2)

Production

- Raw material needed (quantities and pricing)
- Change in processes
- Quality of materials (given the product target market)
- Wastage (anticipated and real)

Cost of raw material

- Economic environment (will impact availability and pricing)
- Quality needed
- Inflation
- Competition for supplies
- Whether commodity pricing has an impact and what are anticipated market trends

Creating the forecasts – information need (3)

Labour

- Wage increases (and wage pressure)
- Overtime (pricing & legal requirements)
- Idle time
- Absenteeism
- Productivity rates

Challenges in constructing budgets

- Forecasting: availability of resources, prices, sales
- Expected inflation should be included in calculations. This can be difficult, due to different price inflation for materials, labour, expenses, etc
- Tendency by management to overstate expected costs, to allow themselves some slack (particularly if budgets are seen as a punitive cost exercise)
- Interdepartmental rivalries can result in dysfunctional behaviour (or sub-optimisation)
- Employees may resist budgets which they feel are too onerous or are ill conceived

Applied Learning

Why Planning and Budget Should be Aligned

European Bank
for Reconstruction and Development

- Your strategic plan is the vision of where you want your company to go. It's aspirational, but not unrealistic. A well thought out plan will tell you where you're going and lay the groundwork for how you'll get there.
- Your business budget should guide you in setting up your resources to execute on that vision. It ensures that the things you need – personnel, investments, equipment, and so forth – are available to get you to wherever you plan on going.
- It's easy to get caught up during the budget process in ensuring that money is allocated for operations and smaller projects that don't feed into the larger plan. It's also easy to set a plan in place that tries to do everything at once and falls short because of lack of resources. Ensuring these two are aligned is how an organisation achieves its **vision.**

Applied Learning

Objectives of Budgeting and Planning

European Bank
for Reconstruction and Development

Long-term strategic plans are broken down into short-term plans and targets. This is generally done in the form of a **budget or forecast.**

A budget is a financial and/or quantitative plan of operations for a forthcoming period.

Planning and control

Budgeting is part of the overall process of planning and control. A budget is a plan which will assist in achieving objectives.

Objectives

Objectives are set to help the organisation control performance.

The system of objectives ranges from high level general objectives to lower level goals for particular individuals in a clear structure.

Applied Learning

Mission and Objectives

Vision

↓

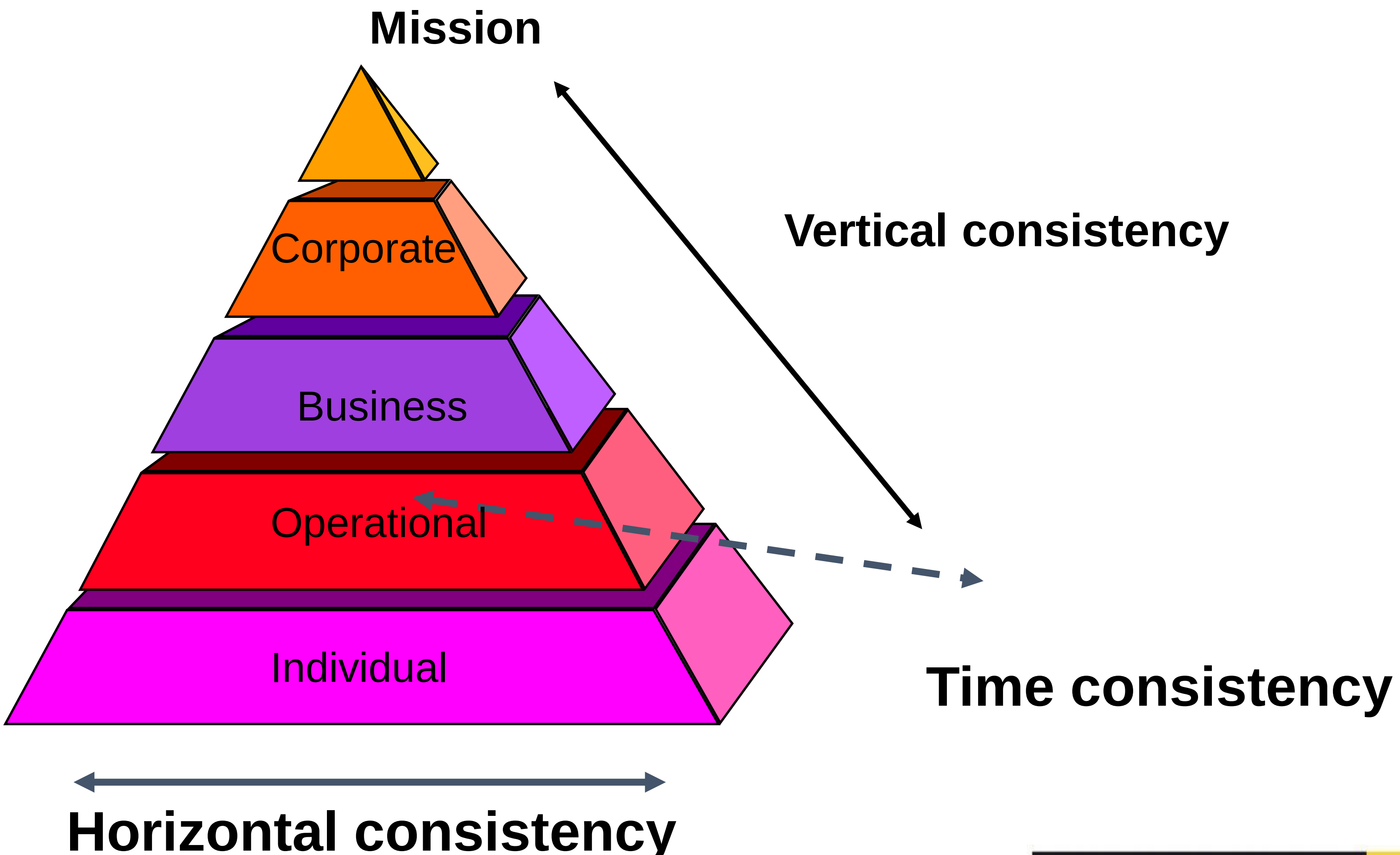
Mission

↓

Goals and objectives

GOAL CONGRUENCE

Mission and Objective setting



Objectives at Rolls Royce Motorcars

European Bank
for Reconstruction and Development

"The World's Finest Motor Car"

- If Rolls Royce's strategic objective is to create the world's finest car, what Materials will they need to use?
- Engines?
- Engineers?
- Designers?
- Workforce?
- Sales force?......

Applied Learning

The process of integrating strategy.

- **VISION** – Where the company wants to arrive
- **MISSION** – The way in which the company will achieve its vision
- **MISSION STATEMENT** – The documented expression of the mission
- **GOALS** – The aims of the Company's strategy
- **OBJECTIVES** – The steps that the company will undertake to fulfil its overall strategy – the bricks in the wall!

Central to Strategic planning……

In order to create competitive advantage, the SME needs to create

CRITICAL SUCCESS FACTORS.

Which it will these use to exploit

MARKET OPPORTUNITIES.

CSFs and Market Opportunities

- A company that has critical success factors will give it a competitive advantage in its industry. That will allow the company to grow and thrive even in an increasingly tough and competitive business environment.
- A company that does not have them will struggle or as Porter defined it, will be stuck in the middle.
- In order to survive the company will have to discount regularly therefore reducing profitability and cash flow.
- Such companies become targets for larger, stronger competitors.
- Creating CSF's is however not enough. Companies and their management must identify market opportunities from which to profit effectively.
- Creating this CSFs and exploiting target markets much be integrated into the budgeting and control process

Creating and entrenching CSFs

- **The Six Steps of the process they describe are:**

1. Identify the CSF's for the process – try and limit this to six
2. Identify the underpinning competences required to gain a competitive advantage
3. Ensure the list of competences is sufficient to give competitive advantage
4. Develop performance standards – KPI's
5. Ensure these cannot be copied
6. Monitor competitors and the impact from the CSF's

- In order to maximise the efficient use of an organisation's resources and goal congruence the CSF's and resultant KPI's should be aligned with the long-term objectives.

Due diligence – understanding the company's development of strategy

- Due diligence important, open ended questions and listen carefully to the answer
- "Explain your competitive advantage"
- "How will you grow your company over the next five years?"
- Ask the potential client's management to interview their customers and suppliers – 360 degree due diligence
- Understand how they organise their Client Relationship Management
- Best companies understand what their customers want before they do and know how to provide it.
- Strategic development is not static (e.g Kodak, Nokia)

Reviewing your company’s Critical Success Factors

European Bank
for Reconstruction and Development

- Identify the Critical Success Factors of your own businesses.
- (What factors allows you to beat your competition?)
- How can you maintain these CSFs over the coming five years?
- What performance measures can you use to measure your progress in maintaining your CSFs?

- **15 minutes**

Applied Learning

The Balanced Scorecard

A balanced, holistic approach to performance management

The Balanced Scorecard

- The balanced scorecard involves measuring four main aspects of a business: Learning and growth, business processes, customers, and finance. BSCs allow companies to pool information in a single report, to provide information into service and quality in addition to financial performance, and to help improve efficiencies.

Balanced scorecard - financial

Financial perspective	
Goals	**Measures**
Survive	Cash flow
Succeed	Sales growth
Prosper	Increase EPS/dividends

Applied Learning

Balanced scorecard- customer

European Bank
for Reconstruction and Development

Customer perspective	
Goals	Measures
Preferred supplier	Customer rating
Fastest supplier	Orders delivered on time
Low bad debts	% provision of sales ledger

Balanced scorecard – innovation & learning

European Bank
for Reconstruction and Development

Innovation & learning perspective	
Goals	**Measures**
Excellence	Rework/reject rates
Market leader	Product rating v competitors
Time to market	Time taken from R&D to sales

Applied Learning

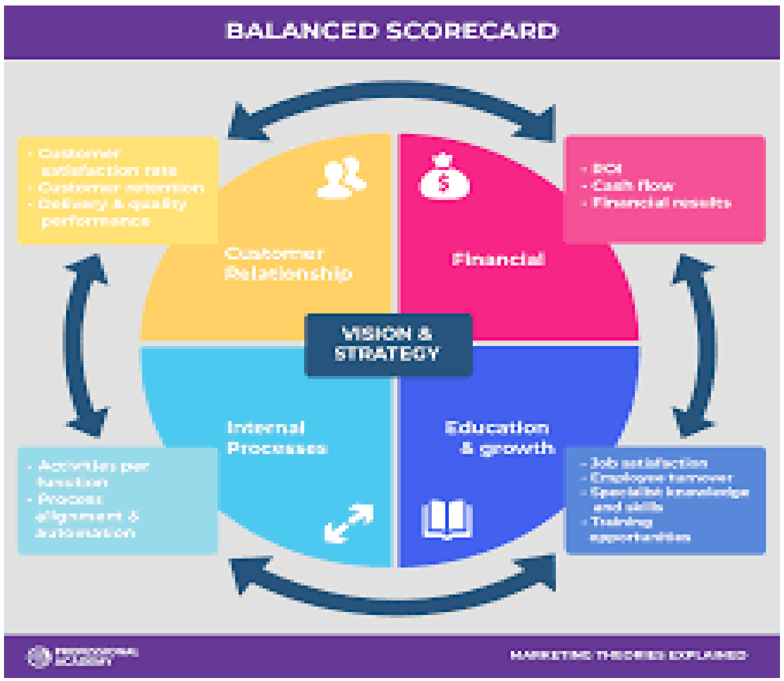
Balanced scorecard – internal

European Bank
for Reconstruction and Development

Internal business perspective	
Goals	Measures
New technology	No. of patents registered
Staff competence	No. of training courses attended
Technology transfer	Inter-company learning rates

Applied Learning

Application of the Balanced Scorecard



- Using the balanced scorecard, identify key performance indicators for either your company or a client company that would allow for an holistic performance assessment of all key areas of the business.
- **15 minutes**

Key Profitability measures

Note the key top line and profit drivers

European Bank
for Reconstruction and Development

- Total Turnover and growth
- Gross profit margins
- Operating profit margins
- Net profit margin
- EBITDA

Revenue Volatility

European Bank
for Reconstruction and Development

Everything is driven by the top line

- Companies that operate in sectors with high revenue volatility and cyclicality experience high business risk.
- E.g. Construction companies, Technology, oil and gas, automotive, airlines and transport also many SMEs
- As revenues drive all aspects of the business, they will also experience volatile cash flows and so should carry **lower levels** of debt.
- **If business risk is high, financial risk should be low.**
- **Companies with high revenue volatility should not carry high levels of debt**

Applied Learning

Key profits and margins

European Bank
for Reconstruction and Development

- **Gross Profit** = Sales – Costs of Goods sold (direct costs)
- **Gross profit margin** = Gross profit /Sales (indicator of competitive pressure) x 100

- **Operating Profit** or Earnings Before Interest and Tax (sales – all operating costs)
- **Operating profit margin** = Operating Profit/Sales (Management cost control) x 100

- EBITDA (Earnings Before Interest, Tax, Depreciation and Amortisation.)

- This profit figure gives a good indication of overall management cost control as it removes expenses over which operating management have little control.

EBIT (a.k.a. Operating Profit)

European Bank
for Reconstruction and Development

- EBIT used as a key performance measure
  - Captures operating performance before impact of financing costs and capital structure effects
  - Shows returns to all providers of capital – debt and equity
  - EBIT margin useful indicator of management efficiency at operating cost control
- Figure typically 'normalised' (EBIT only – OP not normalised)
  - Facilitates year-on-year comparisons
  - Exclude exceptional items
  - Exclude restructuring charges
  - Exclude non-core e.g. associates income

Applied Learning

Different types of operating costs!

Fixed Costs (Overhead)

- Interest payments & debt repayment
- Fixed Overhead (machinery maintenance)
- Salaries (?)
- Research and Development Costs
- Administration costs?
- Marketing costs?

Variable Costs (Costs of Goods Sold)

- Direct material costs (Costs of Goods sold)
- Direct labour costs
- Any other direct GSA costs (some depreciation and amortisation might be included)

EBIT vs. EBITDA

Depreciation and amortisation expense always deducted Before Operating Profit and therefore either embedded in COGS or in Operating expenses

Revenue

−

Cost of Goods Sold = Gross profit

−

Operating Expenses = Operating Profit (EBIT)

−

Interest Payable = Profit before tax

−

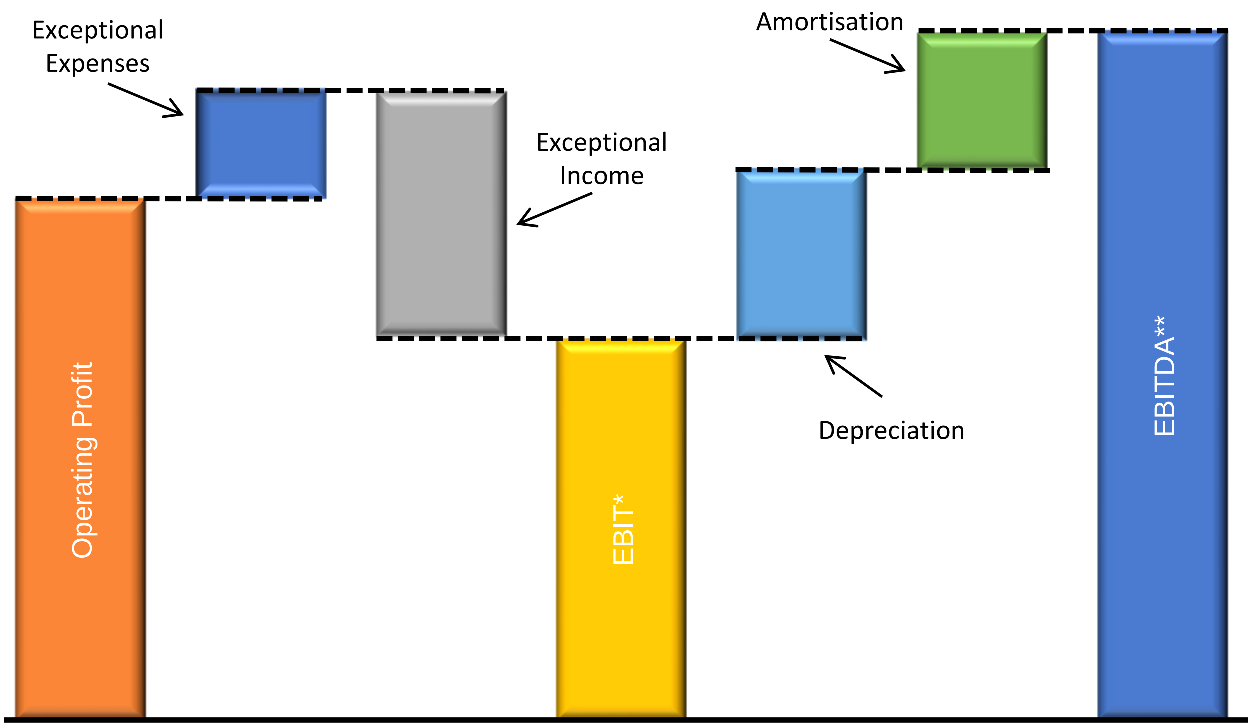
Taxation = Profit after tax (Net income)

EBITDA Margin

- Operating management has very little control over a number of key expenses included in the Income Statement:
- Interest expense is influenced by interest rate fluctuations (Repo / bank rate, Libor, Euribor)
- Taxation levels are set by government / fiscal authorities
- Depreciation and Amortisation expense levels (duration) are set by financial and accounting authorities.
- EBITDA and EBITDA margin therefore provides us with a profit figure that reflects core management performance in running the business and controlling costs.

Applied Learning

Operating Profit vs. EBIT vs. EBITDA



*Earnings Before Interest and Tax
**Earnings Before Depreciation, Amortisation, Interest and Tax

Weighted Average Cost of Capital

- The average cost of finance that a company incurs from its operations

$$\left[K_e \times \frac{\text{Total Equity}}{\text{Debt \& Equity}} \right] + \left[K_{d\,(1\text{-}t)} \times \frac{\text{Total Debt}}{\text{Debt \& Equity}} \right]$$

NB. Kd is calculated net of any associated tax on debt (1-t)

Weighted Average Cost of Capital

- If a company has an equity base of US$250million with a cost of equity of 15% and total debts outstanding of US$350 million organised through a fixed rate loan of 8%, and corporate tax is 30%, what is its WACC?

- $\left(\frac{250m}{250 + 350} \times 0.15\right) + \left(\frac{350}{250 + 350} \times 0.08(1-0.3)\right)$
- $(0.41667 \times 0.15) + (0.5833 \times 0.056)$
- $0.0625 + 0.0326$
- $= 0.0951$ or 9.51%

Applied Learning

Key performance measures - Nestle

Nestle Group				
Performance Ratios				
	2022	**2021**	**2020**	**2019**
Sale growth	7.8%	3.2%	-9.8%	1.2%
Sales (CHF M)	94,424	87,088	84,343	92,568
Gross margin	45.2%	47.8%	49.1%	49.6%
COGS (CHF M)	51,745	45,468	42,971	46,647
Gross Profit (CHF M)	42,679	41,620	41,372	45,921
Operating Margin	13.1%	13.4%	17.5%	17.4%
Operating profit (CHF M)	12,326	11,679	14,796	*16,078*
EBIT Margin (	17.1%	17.4%	17.7%	17.6%
EBIT(CHF M)	16,103	15,119	14,903	*16,260*
Net Profit Margin	10.2%	19.7%	14.7%	13.9%
Net Profit (CHF M)	9,596	17,196	12,372	12,904
EBITDA (CHF M)	19,644	18,660	18,444	19,801
EBITDA Margin	20.8%	21.4%	21.9%	21.4%

Applied Learning

Project Management for Financial Control

Nature of project management

European Bank
for Reconstruction and Development

Project mgmt

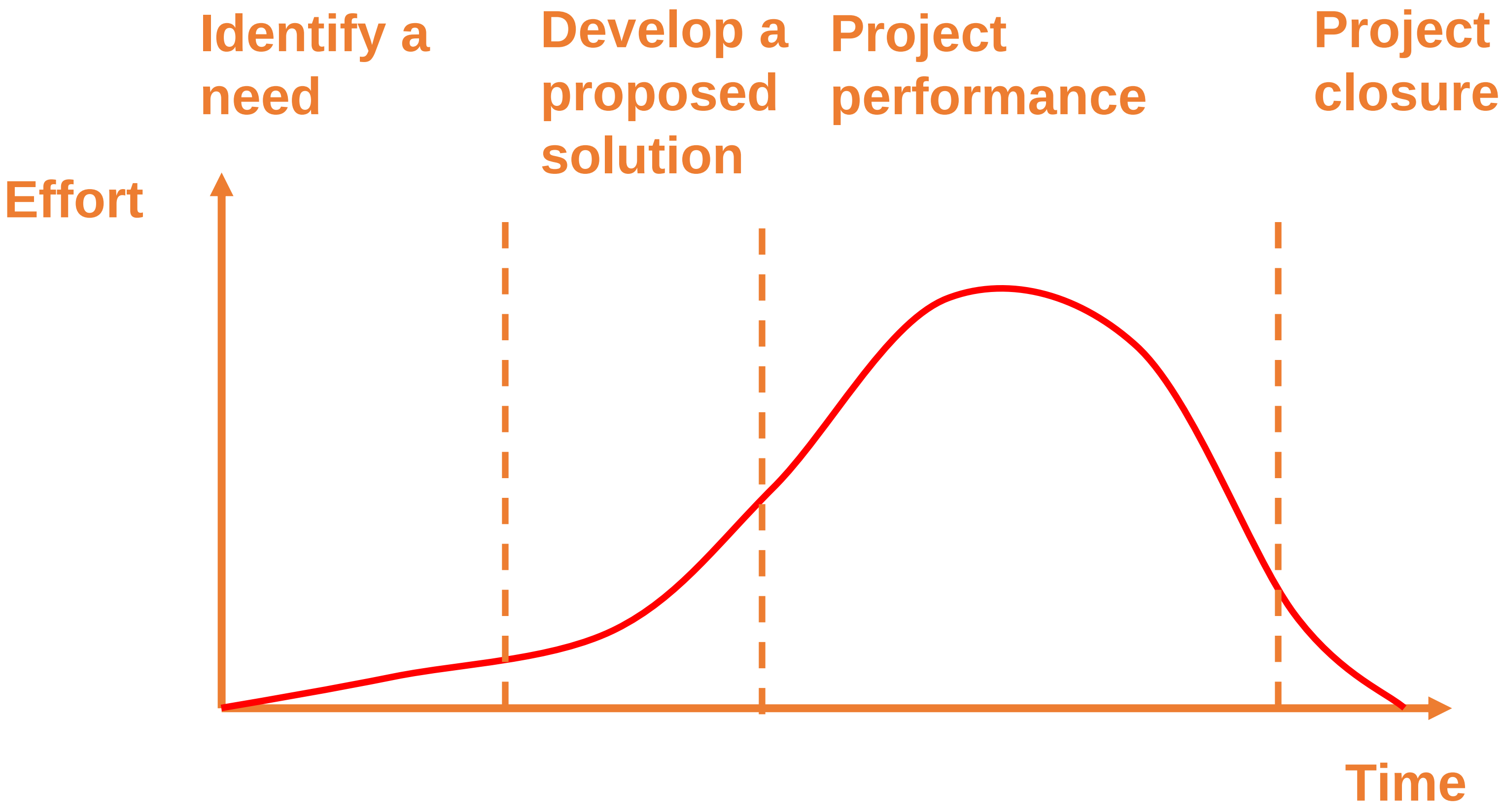
Nature

- *Stakeholders*
- *Fixed timescale*
- *Objectives*
- *Resources*
- *Quality measures*
- *Change*

Knowledge areas

- *Scope*
- *Time*
- *Cost*
- *Quality*
- *Risk*
- *Integration*
- *Resource*
- *Comm'n*
- *Procurement*

The project life-cycle



Nature of project managemen

European Bank
for Reconstruction and Development

Other frameworks

4 D model

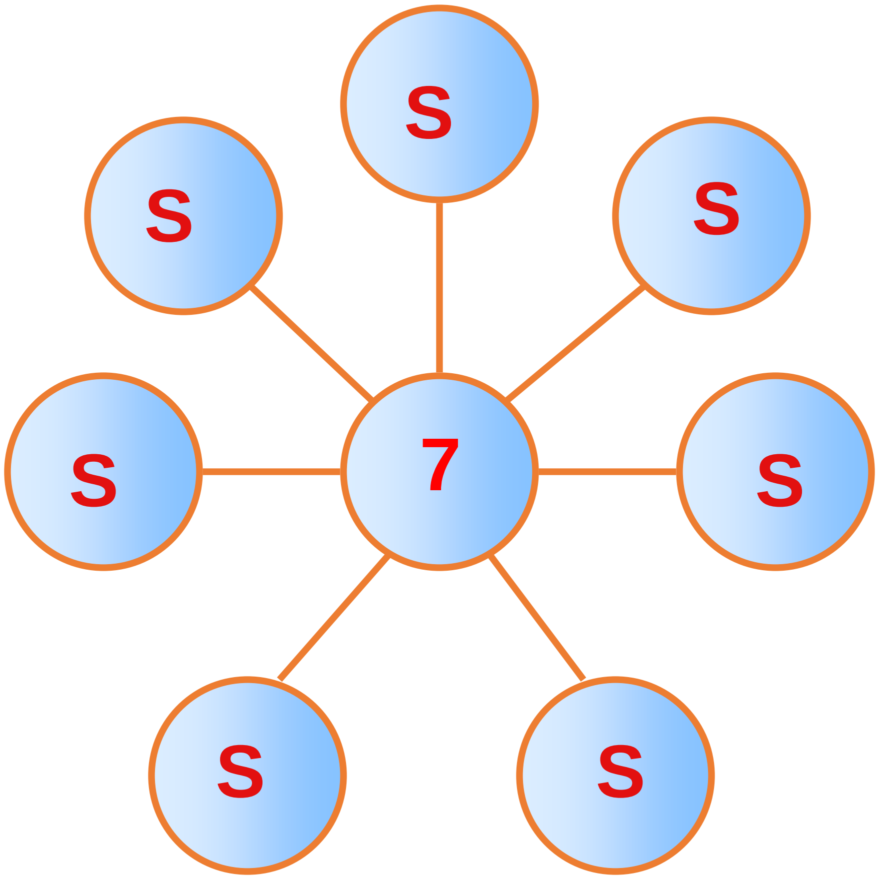
7 S framework

- *Discover*
- *Dream*
- *Design*
- *Deliver*

Applied Learning

7 S model

S	Staff
S	Skills
S	Style
S	Structure
S	Stakeholders
S	Strategy
S	Systems



The Project Management Process

European Bank
for Reconstruction and Development

The Project Management Process

Applied Learning

European Bank
for Reconstruction and Development

Project management process

Project mgmt process

SWOT

- *Strengths*
- *Weaknesses*
- *Opportunities*
- *Threats*

Types of cost

- **Capital**
- **Revenue**

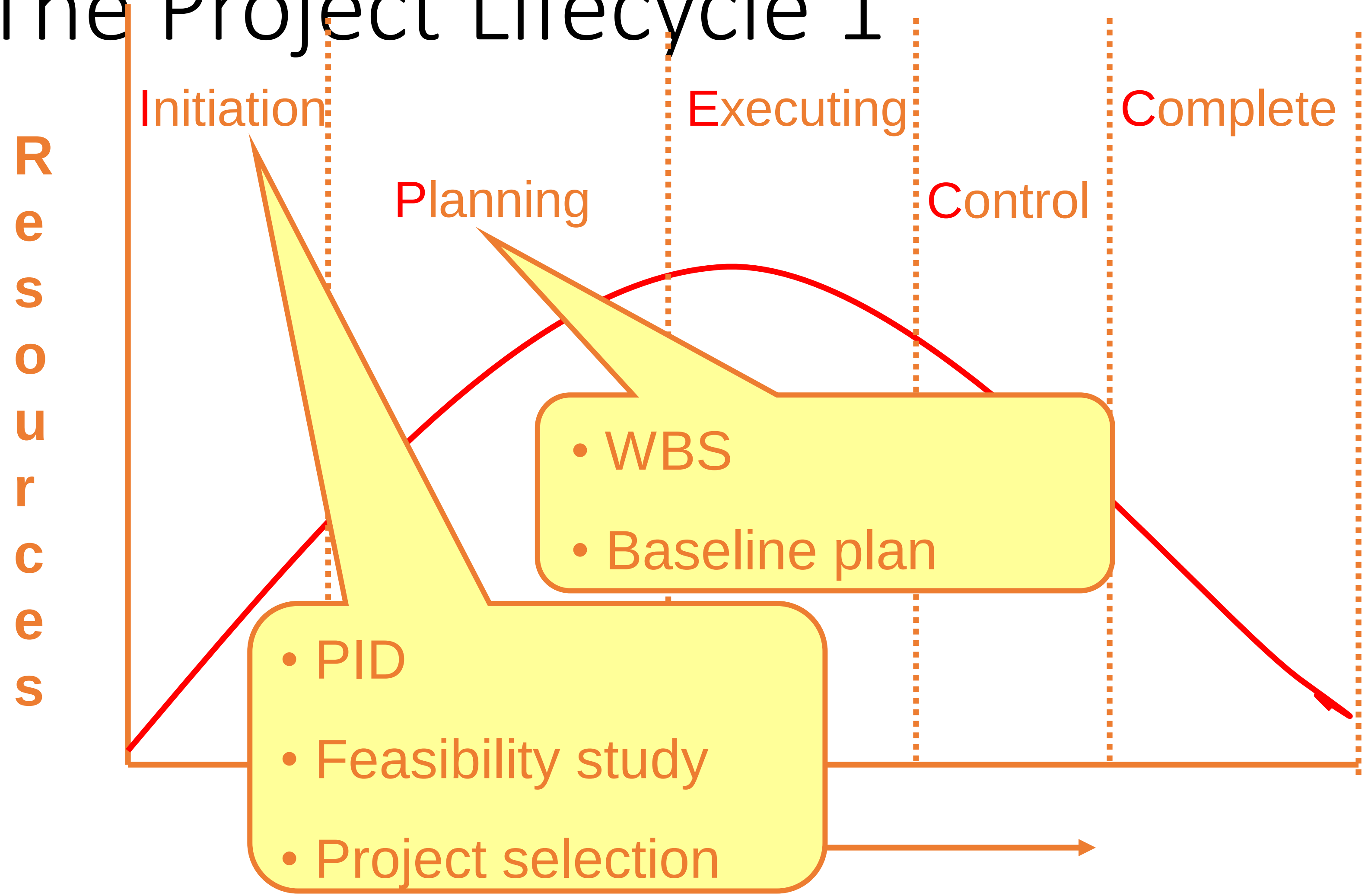
Risk management

Steps

Strategies

Applied Learning

The Project Lifecycle 1



The project management process
Stage 1 – Project Initiation

European Bank
for Reconstruction and Development

Project selection

Stages

List

Decide

Feasibility

- *Social*
- *Technical*
- *Ecological*
- *Financial*

Applied Learning

Stage 1: Project Initiation - PID

European Bank
for Reconstruction and Development

- A project initiation document defines the project scope, milestones and project success criteria. It also sets the context for the project and defines team member roles and responsibilities. As a foundational project document, it is equally important both as an internal guide and for external stakeholders.
- A project manager typically creates a PID during the project initiation phase of the project lifecycle to set the tone, context, expectations, and constraints for the effort. The PID is an artifact from the Prince 2 project management methodology. It might sometimes be called a project charter or project brief.
- In order to manage stakeholder expectations the PID should be discussed and agreed with all principal stakeholders in the project. Their sign off of the PID should be required before beginning the project. This will also prevent 'project creep'.

Applied Learning

Content of the PID

- A project initiation document should include the following:
- Basic information about the project (e.g., client, project name)
- Project background
- Success criteria
- Project budget
- Project timeline
- Scope, including what's in and out of scope
- Project requirement
- Deliverables
- Assumptions and constraints
- High-level project phases
- Stakeholder roles and responsibilities
- Risks, assumptions, and dependencies.

Layout of the PID

European Bank

project-initiation-document-template-docx - Word

File Home Insert Design Layout References Mailings Review View Help Acrobat Tell me what you want to do

Sign in Share

dpm

Project Initiation Document

Client:		**Project name:**	
Client lead:		**Project code:**	
Project Manager:		**Deadline:**	
Version:		**Proposed budget:**	

The Context

WHAT'S THE PROBLEM?	WHY IS THE CLIENT PURSUING IT?
Why is this project being initiated? What is the challenge the client is facing?	Define what are the drivers? (technical? Business goals?)
HOW IS SUCCESS DEFINED?	**HOW WILL WE KNOW IF WE'VE SUCCEEDED?**
What defines success at the end of the project?	Consider what equals success for key stakeholders? How will we measure this project's success?

Project Parameters

WHAT'S THE BUDGET?	WHAT'S THE BUDGET BREAKDOWN?
Describe the budget of the project	How is the budget allocated? (Discover? Design, UX, Development etc.)
TIMELINE	**HOW WILL WE COLLABORATE?**
How much time do we have?	How will collaboration work? (internally and externally)

Project Specifics

SCOPE	INITIAL PROJECT REQUIREMENTS
What's in scope, what's out of scope?	Are there initial requirements for example from an RFP or a previous project?
DELIVERABLES	**ASSUMPTIONS AND CONSTRAINTS**
What are the actual deliverables?	What do we know at this point? And what don't we know?

Project Breakdown

	PHASE	DELIVERABLE	RESOURCE AND HOURS	DUE DATE
1	Kick Off	SOW, Contact Report	Resource 1 (3hr), Resource 2 (1hr)	XXXX-YY-ZZ
2	Requirements Gathering	Requirements (.xlsx)	Resource 2 (40hrs), Resource 3 (8hrs)	XXXX-YY-ZZ

Stage 2 - Planning

European Bank
for Reconstruction and Development

- The Project Management Institute's defines Work Breakdown structure as "a deliverable-oriented hierarchical decomposition of the work to be executed by the project team to accomplish the project objectives and create the required deliverables. It organizes and defines the total scope of the project. Each descending level represents an increasingly detailed definition of the project work. The WBS is decomposed into work packages. The deliverable orientation of the hierarchy includes both internal and external deliverables."
- Some commonly used terms used with WBS project management include:
- **Acceptance Criteria:** Standards to be met to achieve customer or other stakeholder requirements
- **Budget:** Expenses associated with the project, which can be broken down by deliverables or phases
- **Deliverables:** The product, service or results created at various stages of the project. For instance, in a website design project, a deliverable-based WBS would be structured around deliverables such as URL, layout and written content
- **Milestones:** Critical stages of the project identified in the WBS
- **Phases:** The various stages of a project. For instance, in a website design project, a phase-based WBS would be structured around things like discovery, design and launch, rather than specific deliverables
- **WBS:** Work breakdown structure

Applied Learning

Key Characteristics and Components of the WBS

- A key component of a work breakdown structure is the 100% rule. This means that the WBS encompasses all aspects of the project, as well as the person or team responsible for that component.
- Another key characteristic of WBS is its leveled structure. When applying the 100% rule, Level 1 of the WBS will be the totality of the project.
- Some WBSs include a description or overview of the project at the top level if it isn't self-explanatory. Then each level below breaks down the project into further detail, using the 100% rule at each level.
- For instance, if you're creating a WBS for a new website, Level 1 would be " Website for New Brand". Level 2 elements break down the deliverables necessary to bring the project to completion, such as secure website url, design layout and develop content. Each subsequent level continues breaking down the elements into further detail.

Why a WBS is useful for project management

European Bank
for Reconstruction and Development

- Work breakdown structure is a helpful project management tool for several reasons. First, it breaks down the project into bite-size components, making the project less overwhelming and more manageable.
- Second, it provides a roadmap for the different individuals and teams working on the project. Many projects involve different teams moving in tandem, all of which need to coordinate and integrate for project completion. By using a WBS, the various individuals and teams can focus on their specific tasks and deliverables while also seeing how their piece fits into the project as a whole.
- Finally, a WBS is an excellent tool for measuring project completion, identifying milestones and allocating budget resources. By using the 100% rule, project managers can be confident that the project is properly budgeted and that they won't run into any roadblocks due to a "surprise" deliverable.

Applied Learning

How to create and use a WBS successfully

- To create a WBS:
- **1. Define the project.** The first step in creating a work breakdown structure is to clearly establish the project. For some projects, this might be fairly straightforward. For other projects, it might require refining the actual scope of the project so that the WBS is scaled appropriately and doesn't become unwieldy.
- **2. Set project boundaries.** Once the project is defined and described, you can set boundaries on what is and isn't included in the WBS.
- **3. Identify project deliverables.** This will include high-level deliverables associated with the project, such as a Project Scope Statement or Mission Statement.
- **4. Define Level 1 elements.** Remember the 100% rule while creating the Level 1 deliverables.
- **5. Break down each of the Level 1 elements.** The process of breaking down Level 1 elements is called decomposition. It consists of breaking down a task into smaller and smaller pieces, applying the 100% rule at each level. At each subsequent level, ask yourself whether further decomposition would improve project management. Continue breaking down the elements until the answer to that question is "no." When you've completed the decomposition process for each element in Level 1, the WBS is complete.
- **6. Identify team members.** Identify an individual or team who is responsible for each element.
- **7. Create a Gantt chart to accompany the WBS.** A Gantt chart shows activities over time so that you can visually see information related to the schedule of the project and its various activities.

Planning Tools and techniques

Tools

Gannt

Customer Profitabilty Analysis

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
A - design	3	3	3	3	3																	
B - research	2	2	2																			
C - quotes						2	2															
D - prototype						5	5	5	5	5												
E - marketing						3	3	3														
F - costing								2	2													
G - testing											5	5	5	5								
H -survey									4	4	4	4	4	4								
I -pricing															1	1						
J - Report																	2	2	2	2	2	2

Applied Learning

Planning tool - The Resource Audit

The main tool to undertake a resource audit is a list known as 9 M's.

This acts as a checklist of areas to assess as strengths or weaknesses as follows:

1. **Manpower**: An analysis of human resources
2. **Money**: An analysis of financial resources
3. **Machinery:** An analysis of operational resources
4. **Materials:** Purchasing and suppliers factors
5. **Markets:** Issues of marketing and distribution to the customers
6. **Management:** The corporate, tactical and operational stewardship of the company
7. **Methods:** Processes used to create outputs from inputs
8. **Make Up:** Organisational structure and culture
9. **Management Information Systems:** Strategic use of IT and IS

•

Stage 3& 4 : Execution and Control

- Project Execution is the third phase in the project management lifecycle that comes after Project Initiation and Project Planning. You can think of it as a "Go!" phase where you **put everything in motion** and thoroughly **track your tasks and deliverables** to ensure your project succeeds. During this phase, your product teams will create deliverables and present them to your client and key stakeholders.

Execution of the project

European Bank
for Reconstruction and Development

Performing the project

Alternatives

Closure

- *EV M'ment*
- *PMBOK*
- *Six Sigma*
- *Ideal/Intro*

Post completion audit

Continuous improvement

Applied Learning

Project Execution & Control, continued….

- The main purpose of this phase is to complete the work (i.e., produce deliverables according to the plan) and meet project objectives. Therefore, as a project leader, you will focus on such activities as schedule management, budget, and risks.
- Executing a project could take weeks, months, or even years. That is why this phase is usually the longest and also the most demanding.
- During the Project Execution phase, a lot of activities are going on. You will produce most of the deliverables, engage most of the resources, and keep your teams on track. On top of those, you will balance the needs of various stakeholders, project team members, and executives. You will also be dealing with the inevitable project changes and risks and negotiating compromises.

Phases in the Execution & Control Phase

European Bank
for Reconstruction and Development

1. Execute the project scope

- You collected the requirements from the stakeholders, defined the project scope, and shaped it using a work breakdown structure. A list of project goals, deliverables, tasks, costs, and deadlines is also in place. Once it is validated, it is time to put it in motion.

2. Visualize tasks and schedule

- You defined a **project schedule** in the previous phases. Now, it is time to visualize it along with the project tasks and activities in chronological order. The visualization will let you see the whole project in one place and determine what needs to be done and when. And, more importantly, timely react to changes in your project environment. In classic projects, you typically visualize your tasks against the schedule in the form of a horizontal bar chart where each task has a corresponding start and end date. Gantt charts are a common tool for this phase of the project.

Phases in the Execution & Control Phase

3. Manage your resources

- By now, you have created tasks and assigned them to respective team members. But this is only the beginning. Over the course of the Project Execution phase, you will be monitoring your resources' workload and availability and making sure they are working at the optimal capacity.
- **Effort and workload capacity**
- The effort modes allow you to allocate workload (in different units such as hours or story points) to individual persons or teams. Thanks to the color-coded **capacity thresholds** and workload contouring, you will know if one has some space for more work or if they cannot take anymore. Consequently, you will be able to overcome workload imbalances which, in the long run, could cause dissatisfaction in your team members.

Phases in Execution & Control

4. Track progress

- Monitoring and controlling the progress of tasks is a critical part of the execution phase. It determines whether you can deliver the project on time. For this purpose, you can:
- Track task progress with percentage progress bars.
- Generate regular reports (e.g., Delays; Milestones).
- Utilize baselines and milestones on your Gantt chart to monitor how the baseline plan deviates from the current version of your schedule.
- Keep an eye on the Sprint progress with the Agile board.
- Use a calendar to follow current and upcoming tasks.

Execution & Control– Managing stakeholders

European Bank
for Reconstruction and Development

5. Communicate with stakeholders

- Communication plays an important role in the Project Execution phase. You can ensure that your internal and external stakeholders are on the same page by holding regular meetings. Or by communicating with them individually. Naturally, there might be some hiccups or bottlenecks you would like to discuss, and the best would be if you present them visually.

6. React to changes

- Changes in the project, be it additional requests from the client, lack of manpower or alterations of the project schedule, are inevitable. The key is to work out how best to accommodate and adapt to these changes.
- **What-if scenarios**
- If the factor you need to consider is significant, you must assess its impact on the project. Whether the change concerns resources or schedule, you can check how it would affect the rest of your project by **running simulations** using the Scenario mode

Applied Learning

Project stakeholders

Project brief, allocation of funds, terms of reference

- **Project Sponsor**
- **Project Owner**
- **Project Customer**
- **Project Manager**
- **Project Team**

Project proposals schedules, status reports

Phase 5: Project Completion

- In project management, successful completion of the project means you have delivered what you agreed on in the scope of the project. On top of that, you have to make sure you're meeting all acceptance criteria, satisfying the stakeholders, and fulfilling business objectives.
- Stages in project completion include:

1. **Compare objectives and reality**
2. **Confirm project completion with stakeholders**
3. **Confirm if project is within scope**
4. **Clear pending contracts and invoices**
5. **Write a post-project report**
6. **Archive all documentation**

Content of the post completion report

1. A project overview with a summary statement
2. A description of the results and outcomes of the project
3. A comparison of the target vs. actual accomplishments
4. Project milestones and timelines, stating the project duration and schedule variance, if any
5. A list of risks and issues identified and analyzed, while executing the project
6. Details on how many changes were requested, describing those that were approved and implemented and how they impacted the overall project
7. Details on the project cost, showing the total expenditure for the project's completion, the difference between the projected budget and the final payments
8. A summary of the essential feedback collected and lessons learned during implementation

The role of the project manager

The project manager

European Bank
for Reconstruction and Development

Project manager

Responsibilities

- *Organisation*
- *Planning*
- *Controlling*

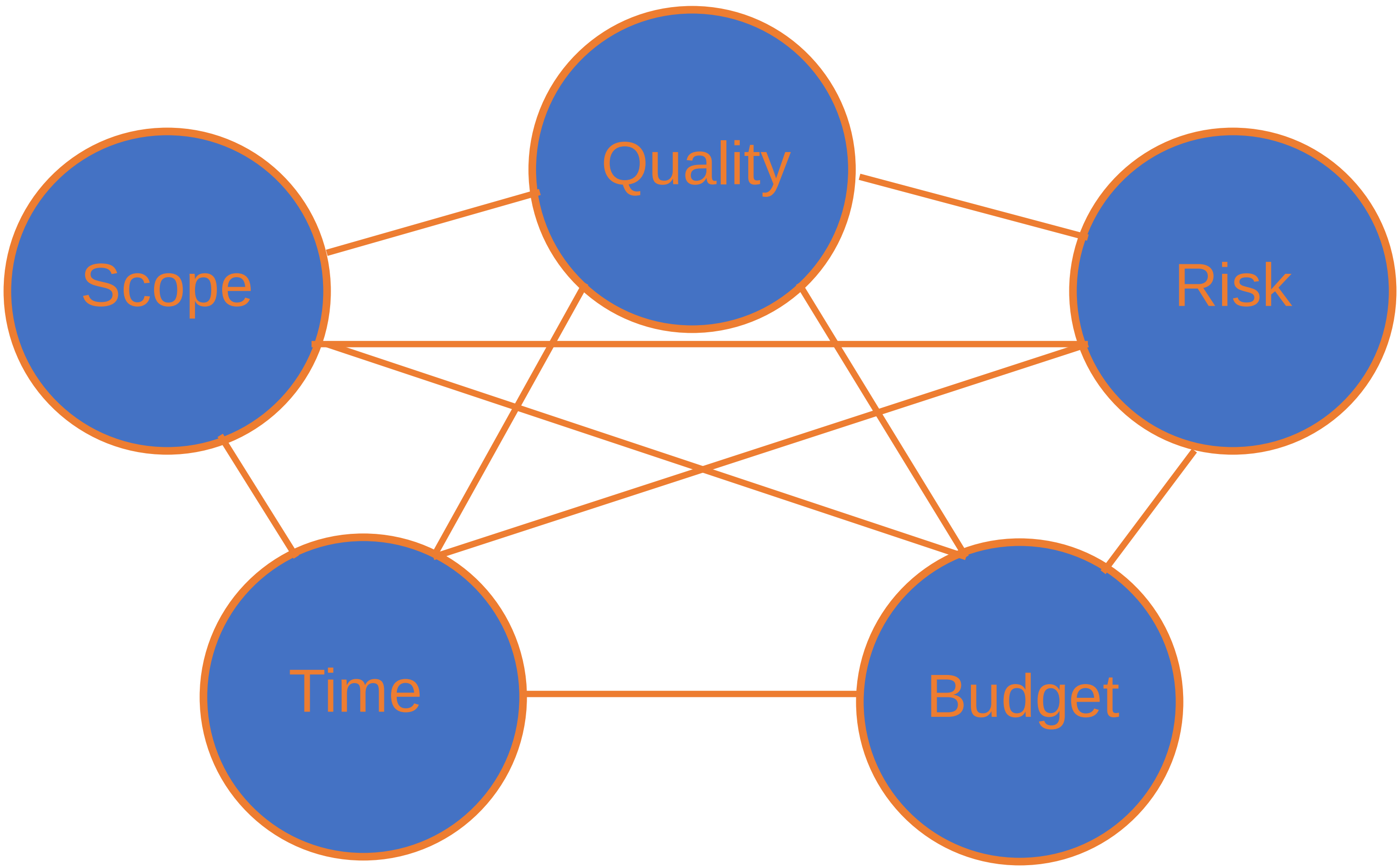
Constraints

Project team

Stakeholders

Applied Learning

Key constraints



Applied Learning

The project manager

The project manager

European Bank
for Reconstruction and Development

Skills

Comm'n

- *Verbal*
- *Written*

Meetings

- *Managing*
- *Projects*
  - *review*
  - *design*
  - *evaluation*

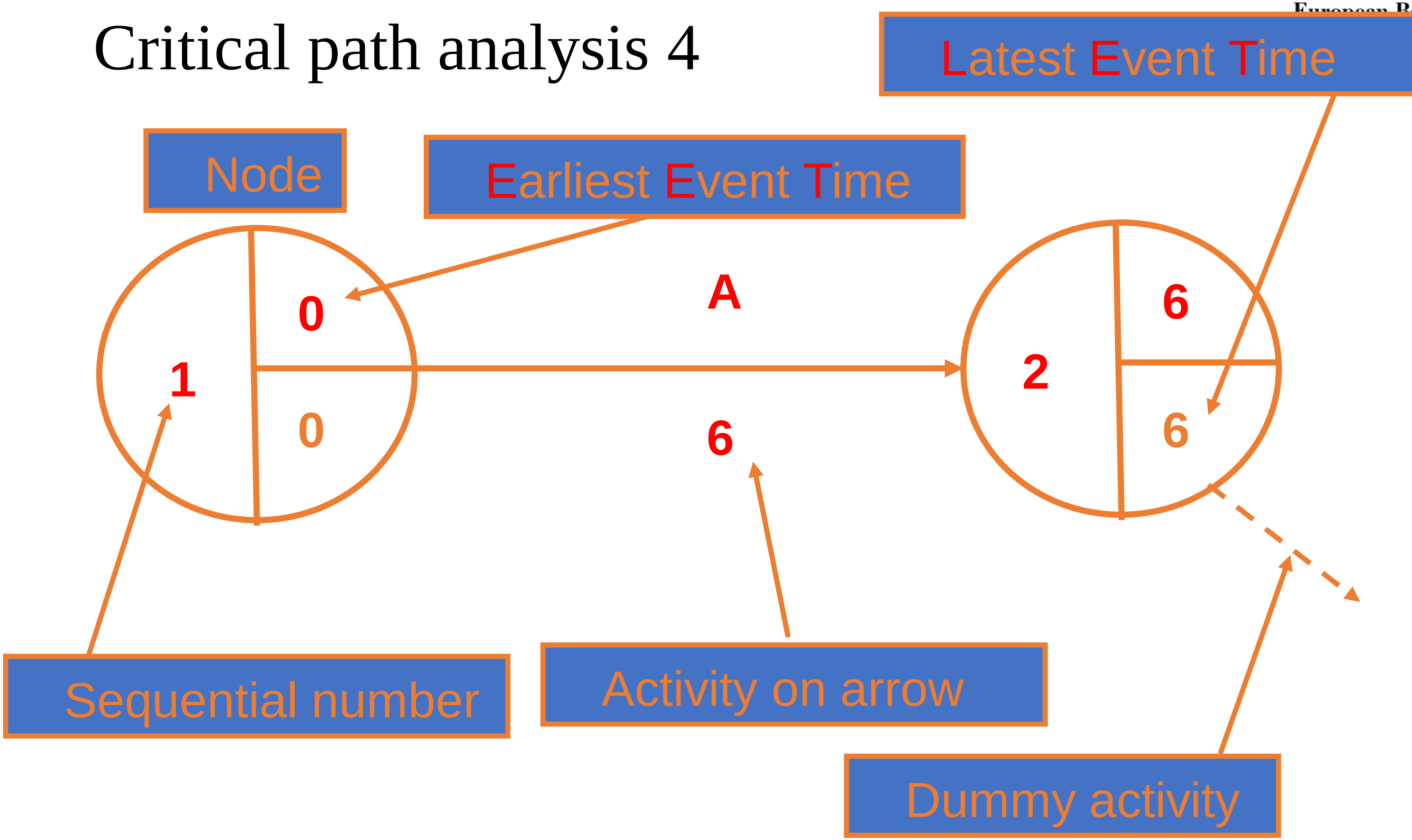
Negotiation

- *Preparation*
- *Opening*
- *Bargaining*
- *Closing*

Info gathering

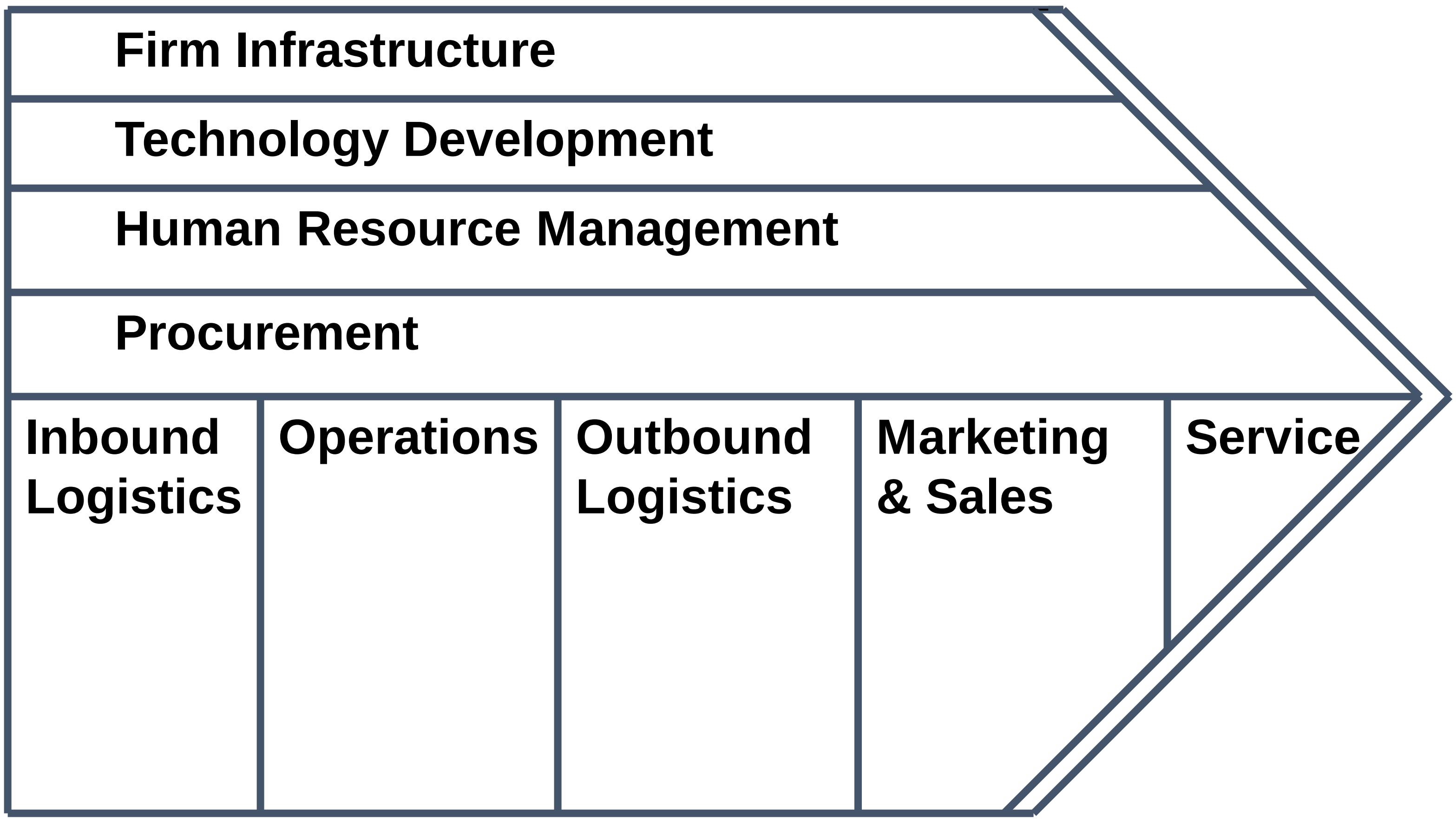
Applied Learning

Critical path analysis 4



Applied Learning

Value Chain


Firm Infrastructure
Technology Development
Human Resource Management
Procurement
Inbound Logistics
Operations
Outbound Logistics
Marketing & Sales
Service

Workshop – Yerevan Consulting Group