POLITECNICO MILANO 1863

Accounting, Finance & Control

Management Reporting

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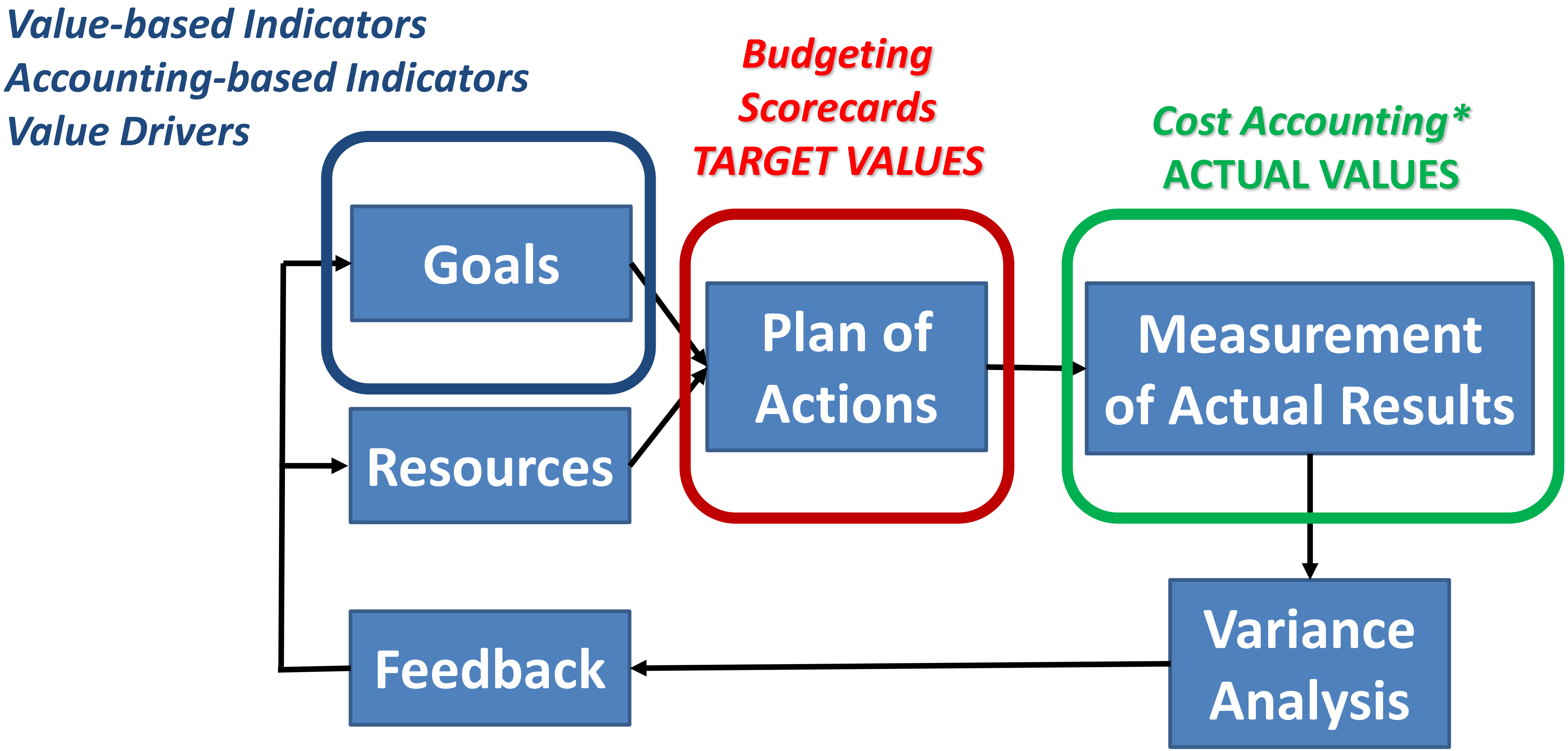
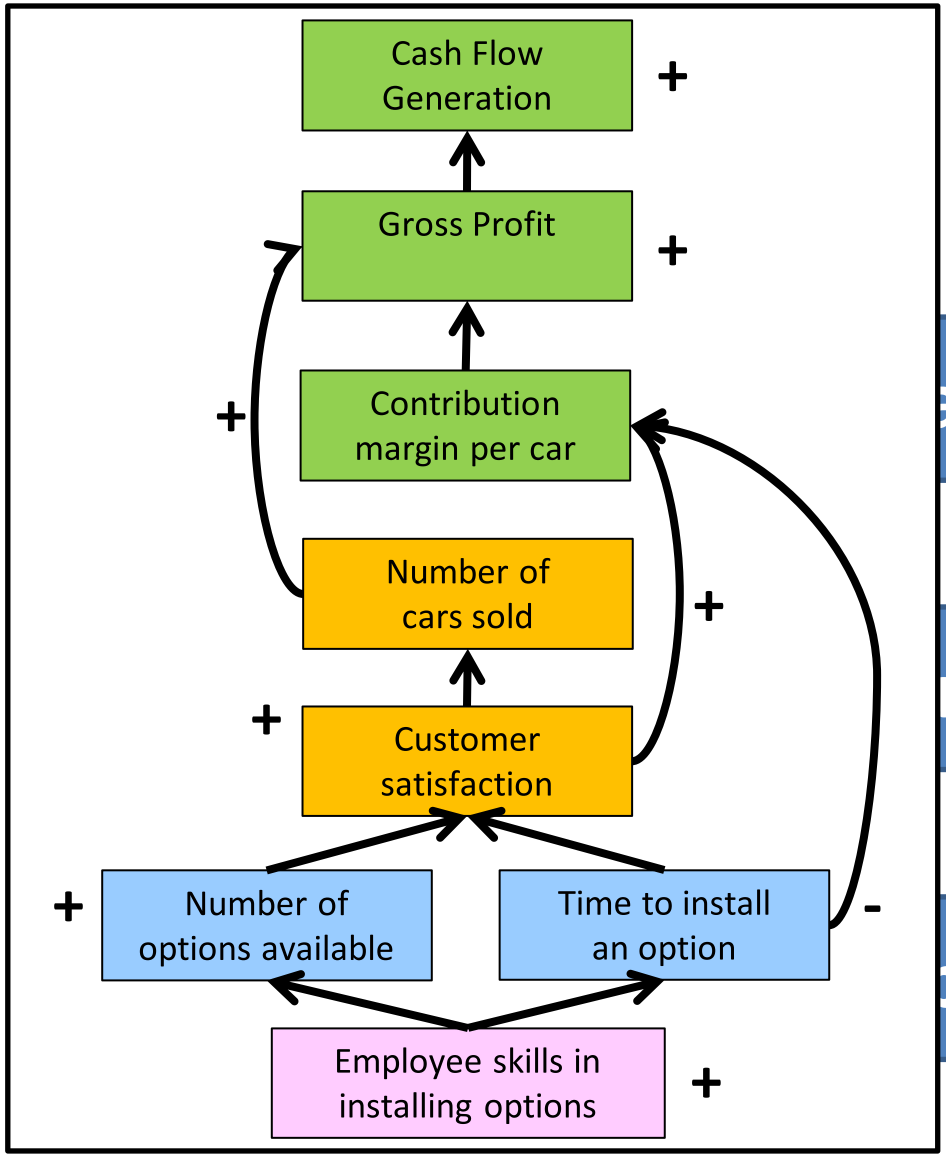
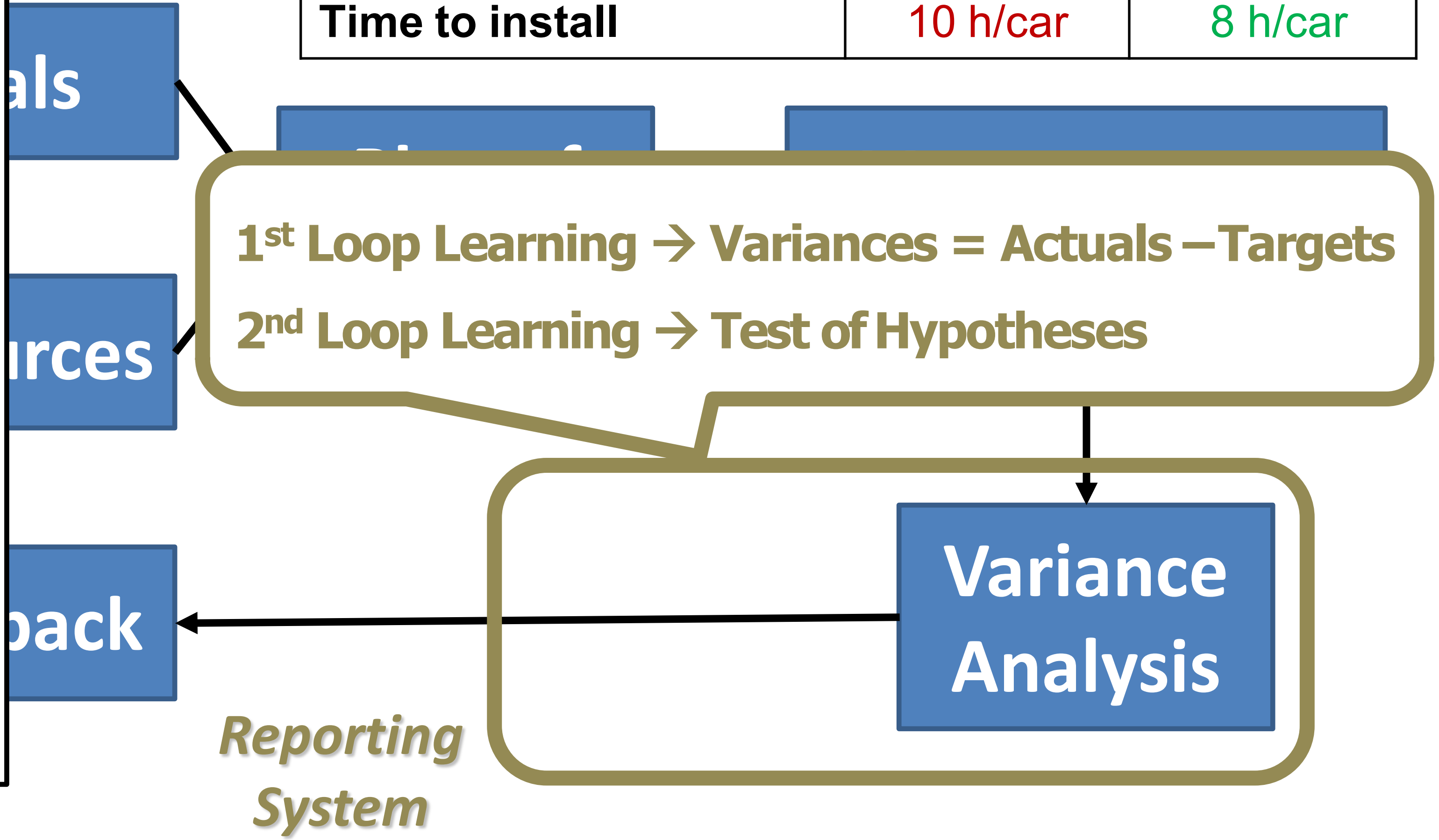
Where we are?


Value-based Indicators
Accounting-based Indicators
Value Drivers
Budgeting
Scorecards
TARGET VALUES
Cost Accounting*
ACTUAL VALUES
Goals
Resources
Plan of Actions
Measurement of Actual Results
Variance Analysis
Feedback

What are we going to discuss?



	Target 2020	Actual 2020
Gross Profit	100,000 €	80,000 €
Customer Satisfaction	4 (out of 5)	4.2 (out of 5)
Time to install	10 h/car	8 h/car



Management Reporting

Process of **communication**
to a manager who is **responsible**
for the allocation or the use of specified resources
of information
regarding current and expected performance
that are **relevant** for her/his **decision-making**

Information that is:

- Relevant
- Reliable
- Timely

An inspiring example

2nd Quarter (April – June)

- ✓ Negative variation of sales
- ✓ Positive variation of full product cost
- ✓ Negative variation of raw material purchasing costs

Variation = actual – target

In red unfavourable variations

COMMENTS TO THE SALES UNIT
You must implement some feedback (corrective actions) … *Hiring new workforce? Training the workforce? Advertising more?*

COMMENTS TO THE OPERATIONS UNIT
You must implement some feedback (corrective actions) … *Reducing production in extra-hours? Reducing spoilage?*

COMMENTS TO THE PROCUREMENT UNIT
Well done!! Keep going as you did!!

An inspiring example (2)

2nd Quarter (April – June)

- ✓ Negative variation of sales less than target
- ✓ Positive variation of full product cost
- ✓ Negative variation of raw material purchasing costs

Variation = actual – target

In red unfavourable variations

WHAT HAPPENED ACTUALLY

The Procurement Unit opened a contract with a new supplier of raw materials whose quality proved to be very poor. As result, the Operations Unit experienced significant problems, being obliged to increase the kg/unit and to rework the products to guarantee the expected quality of finished goods. The Sales Unit faced shortages of products and had to manage many cases of stock out and delays in delivery.

COMMENTS TO THE PROCUREMENT UNIT

You generated big problems!!!

An inspiring example (3)

2nd Quarter (April – June)

- ✓ Negative variation of sales
- ✓ Positive variation of full product cost
- ✓ Negative variation of raw material purchasing costs

Variation = actual – target

In red unfavourable variations

TAKEAWAYS

(1) Reporting must be based on a reliable understanding of the reasons that generated the variations between actual and targets

(2) Incentives must reinforce favourable behaviours

(3) Accounting-based indicators are relevant but are not enough: try to explain that the main reason of the variations has been the poor quality of raw materials through such indicators

(4) Organizational Units are intertwined and the result of one Unit affect the result of the others (cybernetic view of the company)

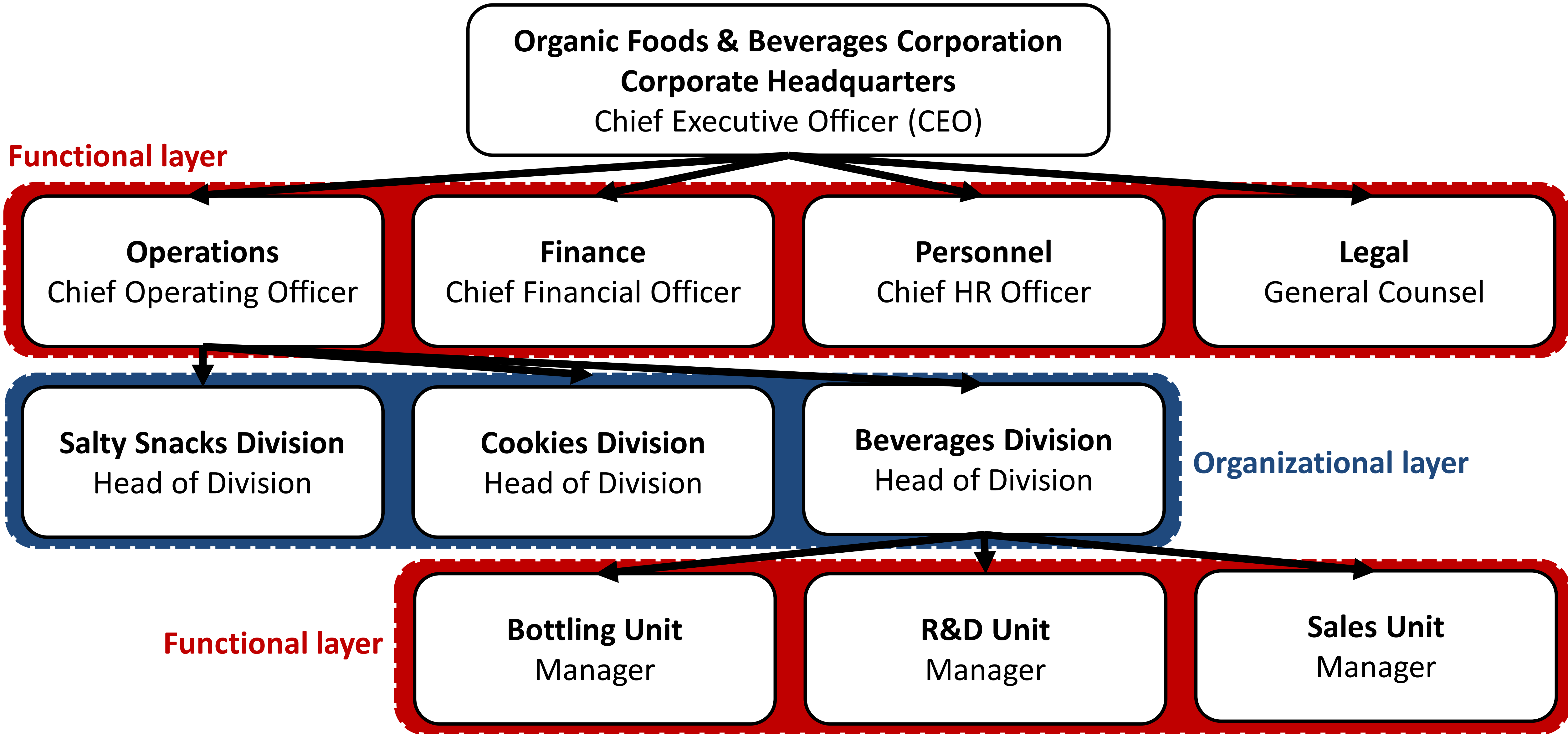
Management Reporting

“Management reports” are the most relevant source of information for managers

Structure and contents might change according to:

- **Addressees:**
  - ✓ Board of Directors (C-levels) / Chief Executive Officer
  - ✓ Head of Divisions (Country Manager, Product Manager, etc.)
  - ✓ Head of Functions (Sales Manager / Operations Manager, etc.)
- **Purposes:**
  - ✓ Pure monitoring of actual performance vs variance analysis
  - ✓ Identification of the reasons of variances to support corrective actions – i.e., changes to existing plans for the months to come
- **Frequency:**
  - ✓ Daily vs. weekly vs. monthly vs. quarterly vs. annual reporting

Management Reporting for Whom?



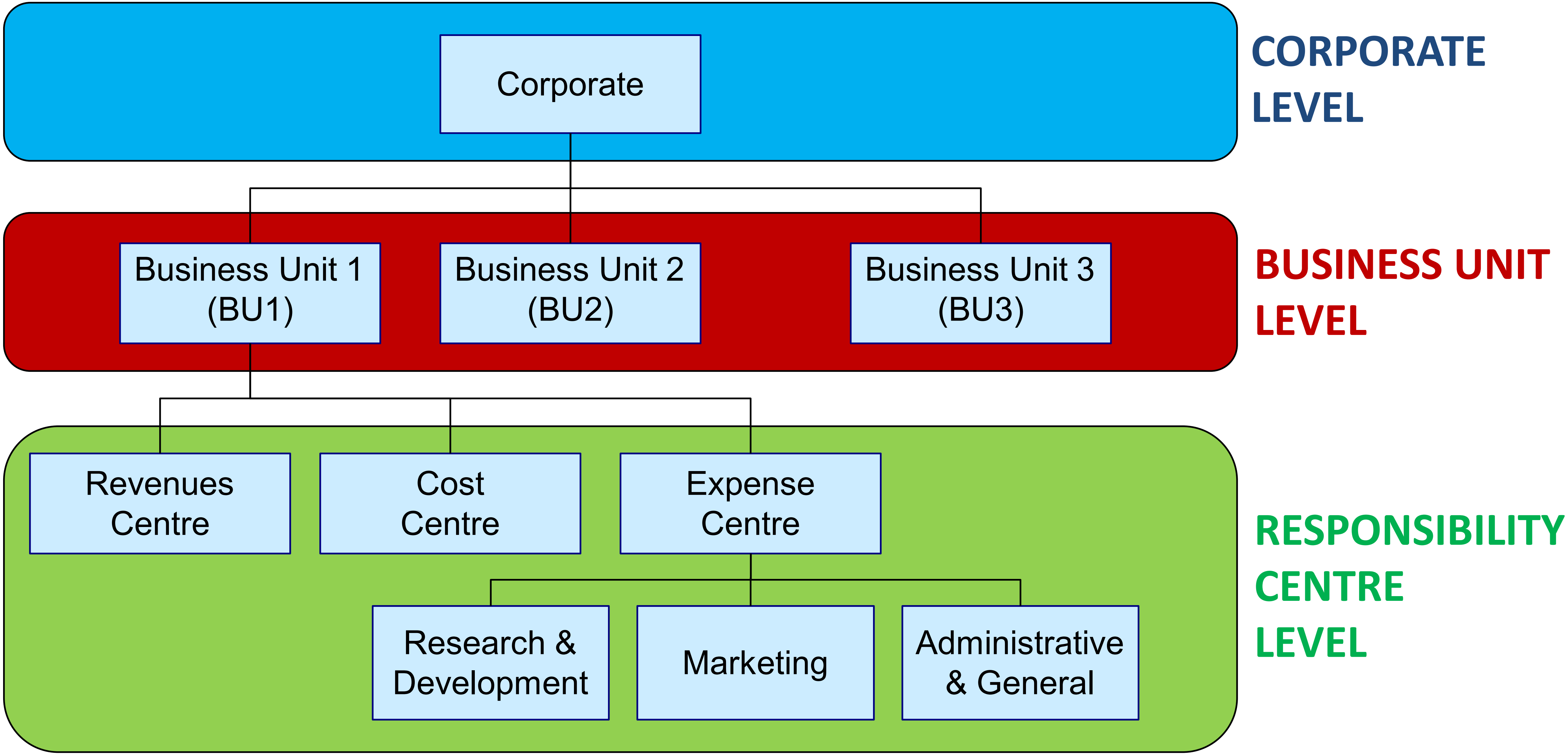
Different Responsibilities

- **REVENUE CENTRE** = An organizational unit whose manager has control over revenues, but not over costs or investment funds
- **COST CENTRE** = An organizational unit whose manager has control over costs, but not over revenues or investment funds; resource consumption is related to volume of production operation
- **EXPENSE CENTRE** = An organizational unit whose manager has control over costs, but not over revenues or investment funds; resource consumption is NOT related to volume of production
- **PROFIT CENTRE** = An organizational unit whose manager has control over BOTH costs and revenues, but no control over investment funds
- **INVESTMENT CENTRE** = An organizational unit whose manager has control over costs, revenues, and investments in operating assets

Back to the previous example

Connect with Budgeting

Hierarchy Levels: A reference framework for us



Decentralization of Reporting: PROs and CONs

- Top management freed to concentrate on strategy
- Lower-level managers gain experience in decision-making
- Decision-making authority leads to job satisfaction
- Lower-level decision often based on better information
- Improves ability to evaluate managers

- May be a lack of coordination among autonomous managers
- Lower-level managers may take decisions without seeing the "big picture"
- Lower-level manager's goals may not be those of the organization

Requirements for Reporting and Hierarchy

Requirements for Reporting	Corporate *(higher levels)*	Business Units Respons. Centres *(lower levels)*
Completeness	+++	+
Measurability	+	+++
Long-term oriented	+++	++
Timeliness	+	+++
Specific responsibilities	+	+++
Stability across time	*Only for external accountability*	

Requirements for Reporting vs Types of Indicators

Requirements for Reporting	Value-based Indicators	Accounting-based Indicators	Value-Drivers
Completeness	+++	++	++
Measurability	+	++	+++
Long-term oriented	+++	+	++
Timeliness	+	+	+++
Specific responsibilities	+	+	+++
Stability across time	*Only for external accountability*		

Requirements for Reporting vs Types of Indicators

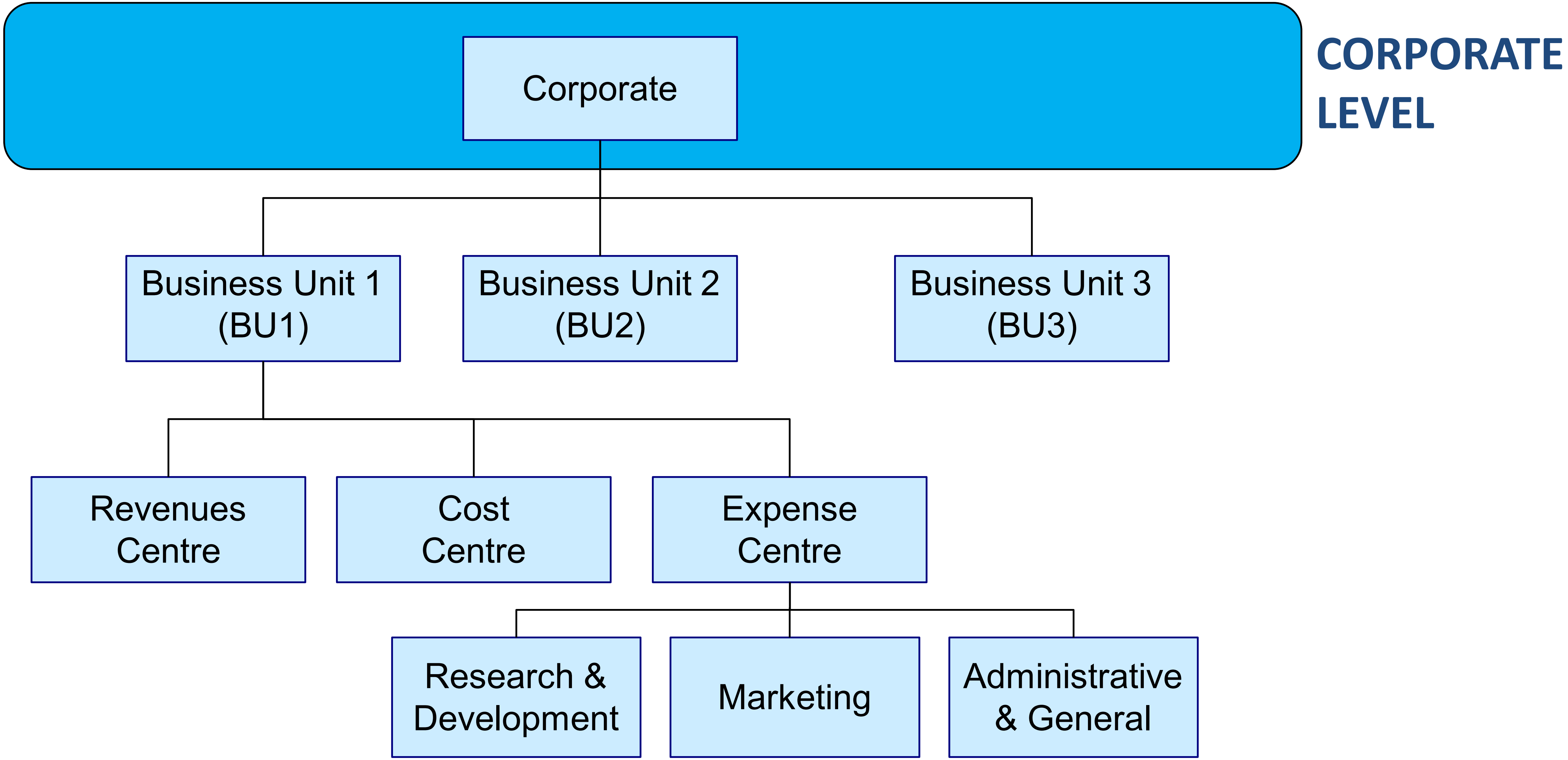
****

Hierarchy	Value-based Indicators	Accounting-based Indicators	Value-Drivers
Corporate	Backbone of the reporting system • EV or E	ROE NPM	Selected drivers for competitive advantages
Business Units	Sometimes • Cash generation	Backbone of the reporting system • ROI or ROA • RI or EVA** • Segment margin*	Selected drivers for competitive advantages
Responsibility Centres		Revenues Costs/Expenses	Backbone of the reporting system

*** Economic Value Added (EVA) = NOPAT – WACC * Invested Capital*

** Revenues – Direct Costs = Revenues – Variable Costs – Direct Fixed Costs*

Reporting at the Corporate Level



What Content for CEO / C-levels? (i)

A. The **external (exogenous) landscape**

PESTLE

(macro-economic indicators – GDP values and trends in the main market countries, inflation rates, interest rates, currency exchange rates, other important facts occurred in the period, etc.)

B. The **Income Statements**

EBIT is the first result of any action.

- ✓ For a Group: Income Statement of the consolidated companies (the Holding, the Subsidiaries)
- ✓ For each company: the total Income Statement, the Income Statement of each Strategic Business Unit / Division

C. The **Cash Flow Statements**

- ✓ Focus on Cash Flow from Operating Activities
- ✓ Relationship with the Cash Flows from Investing and Financing Activities

What Content for CEO / C-levels? (ii)

D. Information about the state of progress of the **investment plan** (use of capital budget)

E. Other (complementary) information about:
   - ✓ State of progress/results of **specific (strategic) projects**
   - ✓ Drill-downs on specific **geographical markets**
   - ✓ Other (often non-financial) information (market shares, time-to-market, customer satisfaction, carbon footprint, sentiment analysis on social media, etc.)

An example of periodic Management Reporting (i)

Assumptions:

- Quarterly reporting
- Income Statement «by destination»

the responsibilty of different

function

	ACTUAL 2ND QTR 2020	BDG 2ND QTR 2020	Variance	Var. %
Revenues	**1.080,00**	**1.000,00**	**80,00**	**8,00%**
- Cost Of Goods Sold (COGS)	750,00	700,00	50,00	7,14%
Gross Margin	330,00	300,00	30,00	10,00%
- Non manufacturing ("SMAG") expenses	215,00	200,00	15,00	7,50%
EBIT	**115,00**	**100,00**	**15,00**	**15,00%**
- Bank interests	15,00	12,00	3,00	25,00%
EBT	100,00	88,00	12,00	13,64%
- Taxes	40,00	35,20	4,80	13,64%
NET PROFIT	**60,00**	**52,80**	**7,20**	**13,64%**
NPM	5,56%	5,28%	0,28%	5,22%

why????????????

Three main sections:

1. actual vs. budgeted data for the 2nd quarter

An example of periodic Management Reporting (ii)

Assumptions:

- Quarterly reporting
- Income Statement «by destination»

	ACTUAL 2ND QTR 2020	BDG 2ND QTR 2020	Variance	Var. %	ACTUAL YTD 2020	BDG YTD 2020	Variance	Var. %
Revenues	**1.080,00**	**1.000,00**	**80,00**	**8,00%**	**2.150,00**	**2.100,00**	**50,00**	**2,38%**
- Cost Of Goods Sold (COGS)	750,00	700,00	50,00	7,14%	1.470,00	1.450,00	20,00	1,38%
Gross Margin	330,00	300,00	30,00	10,00%	680,00	650,00	30,00	4,62%
- Non manufacturing ("SMAG") expenses	215,00	200,00	15,00	7,50%	435,00	400,00	35,00	8,75%
EBIT	**115,00**	**100,00**	**15,00**	**15,00%**	**245,00**	**250,00**	**-5,00**	**-2,00%**
- Bank interests	15,00	12,00	3,00	25,00%	30,00	24,00	6,00	25,00%
EBT	100,00	88,00	12,00	13,64%	215,00	226,00	-11,00	-4,87%
- Taxes	40,00	35,20	4,80	13,64%	86,00	90,40	-4,40	-4,87%
NET PROFIT	**60,00**	**52,80**	**7,20**	**13,64%**	**129,00**	**135,60**	**-6,60**	**-4,87%**
NPM	5,56%	5,28%	0,28%	5,22%	6,00%	6,46%	-0,46%	-7,08%

Three main sections:

1. actual vs. budgeted data for the 2nd quarter
2. actual vs. budgeted data «year-to-date» (cumulated first + second quarters)

An example of periodic Management Reporting (iii)

Assumptions:

– Quarterly reporting
– Income Statement «by destination»

ACTUAL YTD 2020 +
BUDGETED 3RD AND 4TH QTRS
Revenues = 2,150 + (4,160 – 2,100) = 4,210

under performing

	ACTUAL 2ND QTR 2020	BDG 2ND QTR 2020	Variance	Var. %	ACTUAL YTD 2020	BDG YTD 2020	Variance	Var. %	FORECAST 2020	TOTAL BDG 2020	Variance	Var. %
Revenues	**1.080,00**	**1.000,00**	**80,00**	**8,00%**	**2.150,00**	**2.100,00**	**50,00**	**2,38%**	**4.210,00**	**4.160,00**	**50,00**	**1,20%**
- Cost Of Goods Sold (COGS)	750,00	700,00	50,00	7,14%	1.470,00	1.450,00	20,00	1,38%	2.820,00	2.800,00	20,00	0,71%
Gross Margin	330,00	300,00	30,00	10,00%	680,00	650,00	30,00	4,62%	1.390,00	1.360,00	30,00	2,21%
- Non manufacturing ("SMAG") expenses	215,00	200,00	15,00	7,50%	435,00	400,00	35,00	8,75%	865,00	830,00	35,00	4,22%
EBIT	**115,00**	**100,00**	**15,00**	**15,00%**	**245,00**	**250,00**	**-5,00**	**-2,00%**	**525,00**	**530,00**	**-5,00**	**-0,94%**
- Bank interests	15,00	12,00	3,00	25,00%	30,00	24,00	6,00	25,00%	54,00	48,00	6,00	12,50%
EBT	100,00	88,00	12,00	13,64%	215,00	226,00	-11,00	-4,87%	471,00	482,00	-11,00	-2,28%
- Taxes	40,00	35,20	4,80	13,64%	86,00	90,40	-4,40	-4,87%	188,40	192,80	-4,40	-2,28%
NET PROFIT	**60,00**	**52,80**	**7,20**	**13,64%**	**129,00**	**135,60**	**-6,60**	**-4,87%**	**282,60**	**289,20**	**-6,60**	**-2,28%**
NPM	5,56%	5,28%	0,28%	5,22%	6,00%	6,46%	-0,46%	-7,08%	6,71%	6,95%	-0,24%	-3,44%

Three main sections:

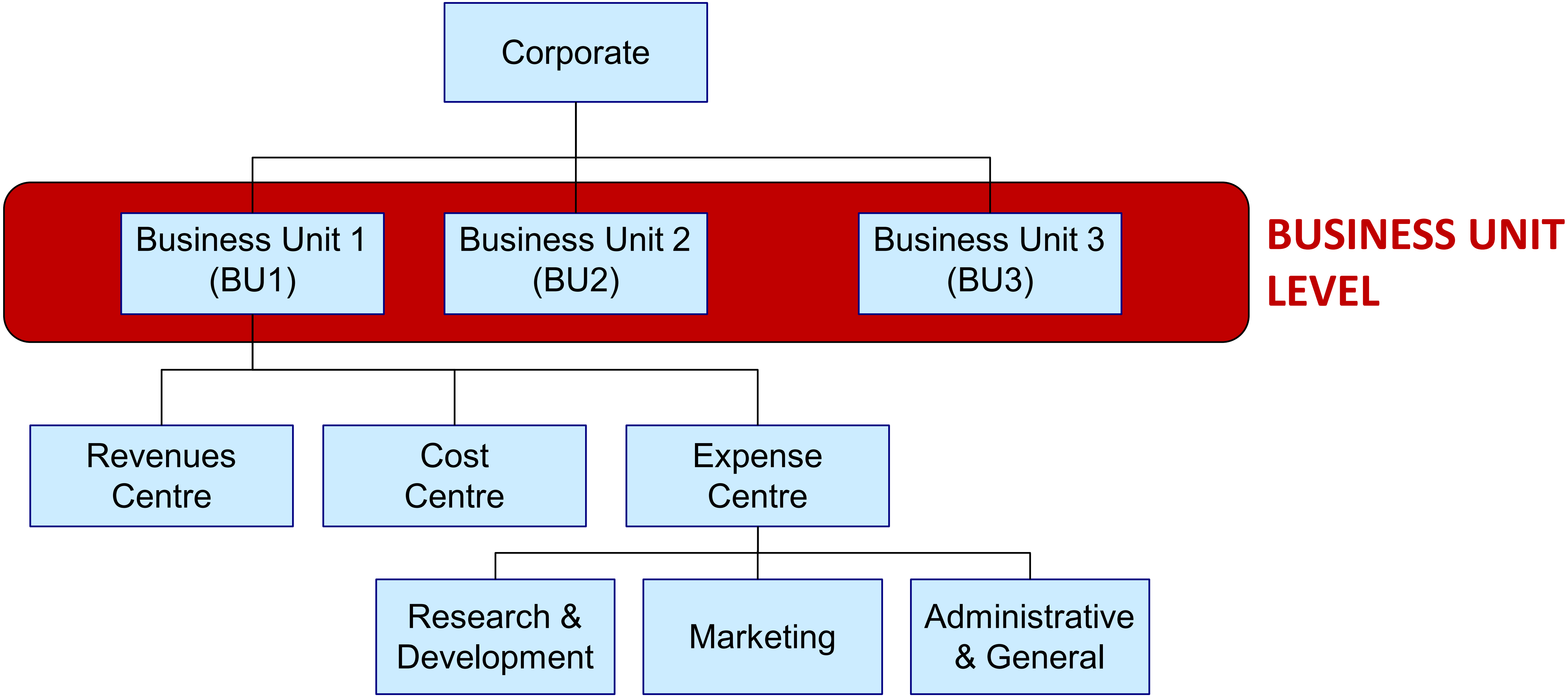
1. actual vs. budgeted data for the 2nd quarter
2. actual vs. budgeted data «year-to-date» (cumulated first + second quarters)
3. forecast 2020 (i.e. actual data YTD + revised budgets for the 3rd and 4th quarters) vs budget 2020

Periodic Management Reporting

The starting point is the **profitability analysis** with a focus on the **Income Statement**

- The traditional framework includes **actual** vs **budgeted data**, where variances (deviations) are also reported (absolute and % values)
- Usually the statement includes at least two sections:
  - Actual vs budget values concerning the **last timeframe** (in case of monthly reporting: last month).
  - **Cumulated** actual vs. budget values for the Year-To-Date (**YTD**)
- In some cases a further section is added, which includes the expected results for the whole year (usually called **"forecast"** or **"pre-closing"**) vs. the total budget values (as from initial budget) and/or vs. previous forecast (if any)
- Sometimes actual and budgeted data are compared also with the corresponding actual data of previous year (to enable a "Year-To-Year" comparison)

Hierarchy Levels: A reference framework for us



Requirements for Reporting vs Types of Indicators

Hierarchy	Value-based Indicators	Accounting-based Indicators	Value-Drivers
Corporate	Backbone of the reporting system • EV or E	ROE NPM	Selected drivers for competitive advantages
Business Units	Sometimes • Cash generation	Backbone of the reporting system • ROI or ROA • RI or EVA** • Segment margin*	Selected drivers for competitive advantages
Responsibility Centres		Revenues Costs/Expenses	Backbone of the reporting system

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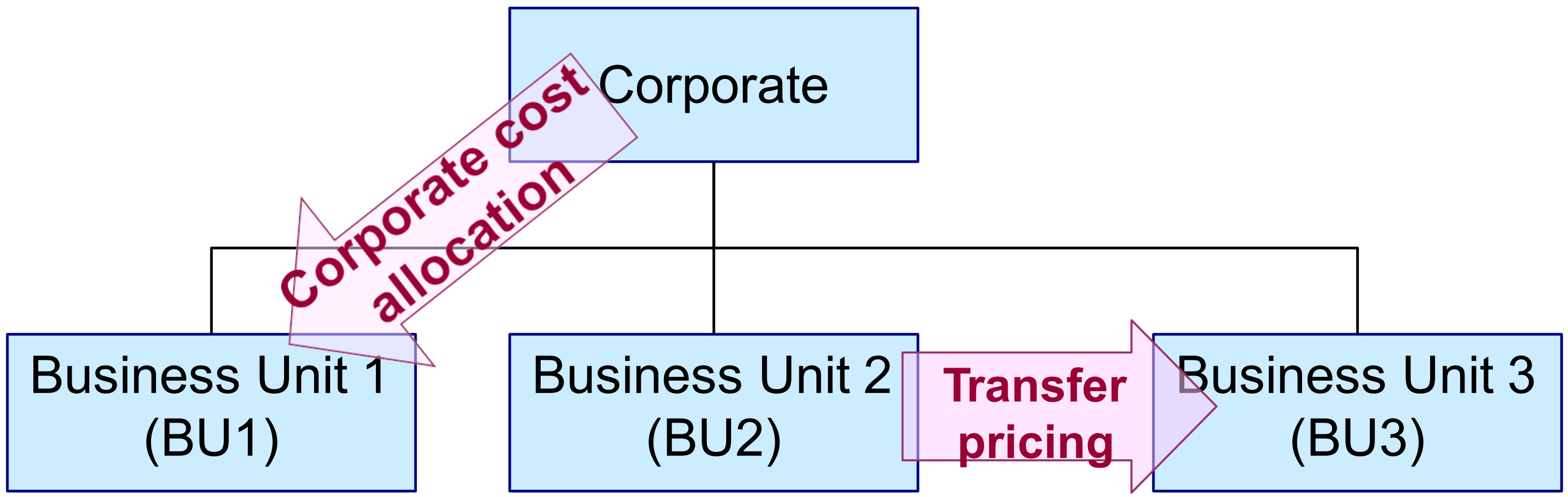
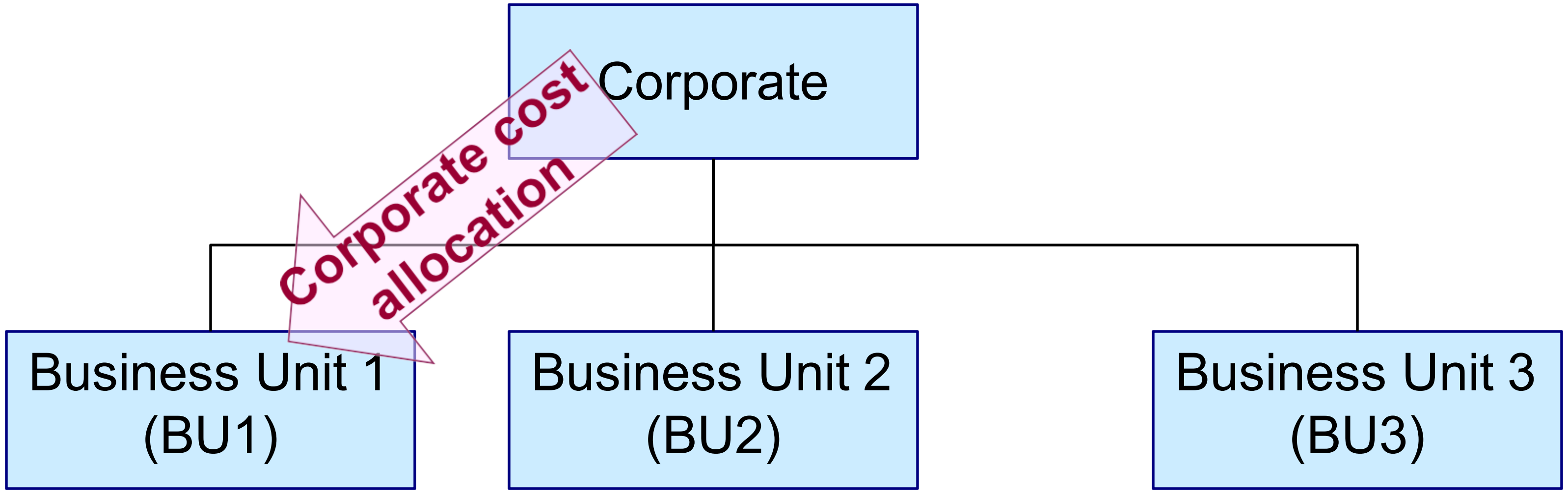
From the Corporate to the Business Units



Reporting at the Business Unit level relies mainly on accounting-based indicators to be applied to the Income Statement till the EBIT. To generate it, two relevant issues arise:

- Resources used by BUs but managed at the corporate level (**corporate cost allocation problem**)
- Existing transactionswith other BUs within the company (intra-company exchanges) (**transfer pricing problem**)

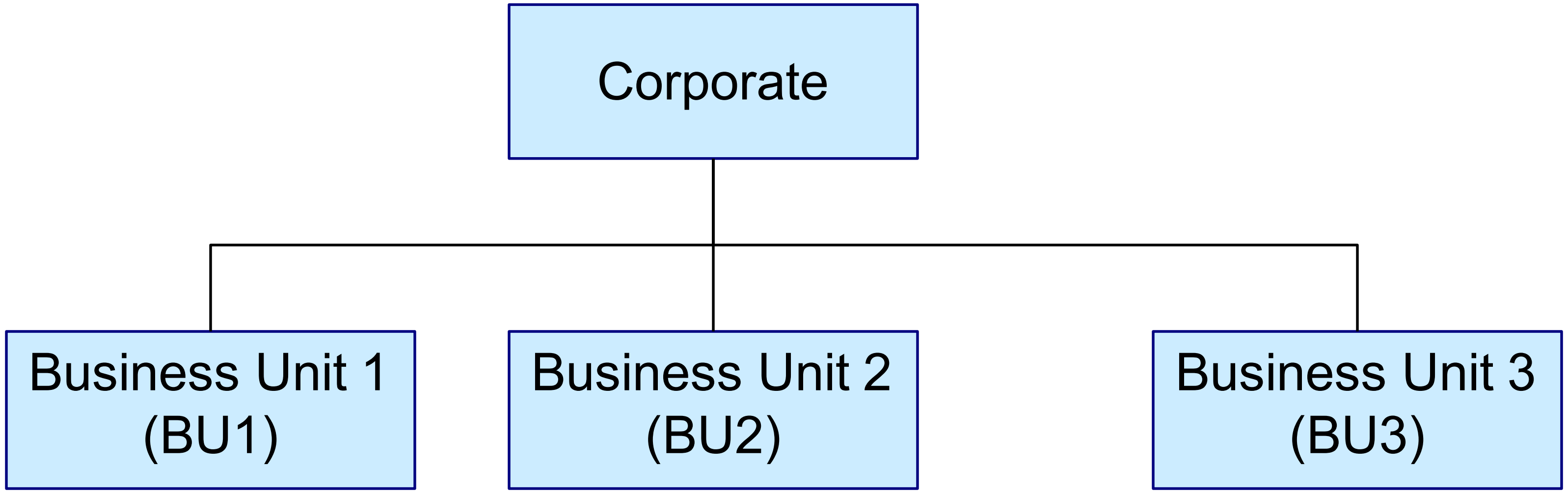
Corporate Costs Allocation (i)



Reporting at the Business Unit level relies mainly on accounting-based indicators to be applied to the Income Statement till the EBIT. To generate it, two relevant issues arise:

– Resources used by BUs but managed at the corporate level (**corporate cost allocation problem**)

An example to clarify



R&D is managed at the corporate level.
Total R&D costs for the period are 190,000 €
The R&D unit has managed the following R&D projects:

- Investigation of new materials for BU1 (45,000 €)
- Search for new production machines for BU2 (35,000 €)
- Validation of a new tracing system for BU3 (20,000 €)
- Exploration of potential advantages due to AI-based solutions (90,000 €)

Traceable vs Not Traceable Corporate Costs

Examples of Corporate Costs:
R&D activities, legal activities, brand marketing campaigns, IT security etc.

- **DIRECT corporate Costs** (i.e., *Traceable*) are those corporate costs that can be specifically and exclusively identified with a particular BUSINESS UNIT:
  - *If the R&D department carried out applied research on behalf of BUSINESS UNIT (A), the incurred costs are DIRECT to BU (A)*
- **INDIRECT Corporate Costs** (i.e., *Not Traceable*) are those costs that cannot be identified specifically and exclusively with a particular BUSINESS UNIT:
  - *If the R&D department carried out basic research on behalf of the whole company, the incurred costs are INDIRECT to the BUs*

Corporate Costs Allocation (ii)

Examples of Corporate Costs: R&D activities, legal activities, brand marketing campaigns, IT security etc.

There are 3 main strategies:

	PROs	CONs
No allocation	**No costs for running the system**	**Risk of uncontrolled use of resources**
Complete allocation	**Managers know that corporate services are not for free**	**Need of precision** **Risk of not using services even if they are needed**
Partial Allocation	**Specific responsibilities** **Clear decision-making**	**It cannot be applied to all types of corporate costs**

Corporate Costs Allocation (iii)

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From a theoretical perspective, corporate costs should be allocated to Business Units accordingly to:

- **services delivered**
- **benefits generated**

When this is not straightforward, "default" drivers are used:

- **revenues**
- **full time equivalent (FTE) employees**

No	ystem	f resources
Complete allocation	Managers know that corporate services are not for free	Need of precision Risk of not using services even if they are needed
Partial Allocation	Specific responsibilities Clear decision-making	It cannot be applied to all types of corporate costs

Corporate Costs Allocation (iv)

Example: costs of the corporate Finance Office

- capacity for internal consulting = 200 h
- overall costs = 50,000 €

Two Business Units:

- BU(A) = use of 100 h of the corporate Finance Office
- BU(B) = use of 60 h of the corporate finance office

Total usage = 160h (80% of the available capacity)

HOW TO ALLOCATE?

Partial Allocation	**Specific responsibilities** **Clear decision-making**	**It cannot be applied to all types of corporate costs**

Corporate Costs Allocation (iv)

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Th

Consumption

- Cost per hour = 50,000€ / 160h = 312.5€/h
- Costs to BU(A) = 312.5€/h * 100h = 31,250€
- Costs to BU(B) = 312.5€/h * 60h = 18,750€

Fees

- **Cost per hour = 50,000€ / 200h = 250€/h**
- **Costs to BU(A) = 250€/h * 100h = 25,000€**
- **Costs to BU(B) = 250€/h * 60h = 15,000€**
- **Costs NOT allocated = 10,000€ → corporate costs NOT allocated (partial)**

N		
C	**t for free**	**even if they are needed**
Partial Allocation	**Specific responsibilities** **Clear decision-making**	**It cannot be applied to all types of corporate costs**

An example to clarify (1)

XYZ COMPANY – Income Statement Nov. 2023

	Total Company
Sales (Revenues)	\$ 750,000
Less variable expenses	- \$ 336,000
Contribution Margin	**\$ 414,000**
Less fixed expenses	- \$ 378,000
EBIT (Net Operating Income)	**\$ 36,000**

Management is disappointed with the company's performance and is wondering what can be done to improve profits.

The Income Statement by Contribution Margin organizes costs in VARIABLE vs FIXED

This 3rd scheme is useful for supporting short-term decision-making

contribution margin per unit
m = SPU – VCU

Contribution Margin (total) = Revenues – Variable Costs

An example to clarify (2)

XYZ COMPANY – Income Statement Nov. 2023

SEGMENTS

	Total Company	**Business Unit A**	**Business Unit B**
Sales (Revenues)	$ 750,000	$ 300,000	$ 450,000
Less variable expenses	- $ 336,000	$ 156,000	$ 180,000
Contribution Margin	**$ 414,000**	$ 144,000	$ 270,000
Less allocated fixed expenses	- $ 228,000	$ 120,000	$ 108,000
Business Unit Segment Margin	**$ 186,000**	**$ 24,000**	**$ 162,000**
Less not allocated Corporate Costs	$ 150,000		
EBIT (Net Operating Income)	**$ 36,000**		

An example to clarify (3)

XYZ CO[illegible]

SEGMENTS

	[illegible]	Business Unit A	Business Unit B
Sales (Re[illegible]	[illegible]0	$ 300,000	$ 450,000
Less variable expenses	[illegible]6,000	$ 156,000	$ 180,000
Contribution Margin	**$ 4[illegible]0**	$ 144,000	$ 270,000
Less allocated fixed expenses	- $ 228,000	$ 120,000	$ 108,000
Business Unit Segment Margin	**$ 186,000**	**$ 24,000**	**$ 162,000**
Less not allocated Corporate Costs	$ 150,000		
EBIT (Net Operating Income)	**$ 36,000**		

SEGMENT MARGIN =
Revenues – Direct Costs
(both variable and fixed)

CORPORATE COSTS
that are not allocated
to the segments

An example to clarify (4)

XYZ COMPANY – Income Statement Nov. 2023

	Total Company	**Business Unit A**	**Business Unit B**
Sales (Revenues) %	100.0%	100%	100%
Less variable expenses %	- 44.8%	- 52%	- 40%
Contribution Margin %	**55.2%**	**48%**	**60%**
Less allocated fixed expenses %	- 30.4%	- 40%	- 24%
Business Unit Segment Margin %	**24.8%**	**8%**	**36%**
Less not allocated Corpor. Costs %	- 20%		
ROS	**4.8%**		

Segments' performance can be better understood and analysed dividing by revenues

An example to clarify (4)

Compared to the BU_B, BU_A has a lower contribution margin ratio

XYZ COMPANY – Income Statement Nov. 2023

	Total Company	Business Unit A	Business Unit B
Sales (Revenues) %	100.0%	100%	100%
Less variable expenses %	- 44.8%	- 52%	- 40%
Contribution Margin %	**55.2%**	**48%**	**60%**
Less allocated fixed expenses %	- 30.4%	- 40%	- 24%
[illegible]	**24.8%**	**8%**	**36%**
[illegible]	[illegible]		
ROS	**4.8%**		

Overall, compared to BU_B, BU_A has a very weak performance

BU_A has high traceable fixed expenses

Segments' performance can be better understood a [illegible] es

Accounting-based indicators are not enough…

Hierarchy	Value-based Indicators	Accounting-based Indicators	Value-Drivers
Corporate	Backbone of the reporting system • EV or E	ROE NPM	Selected drivers for competitive advantages
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*** Economic Value Added (EVA) = NOPAT – WACC * Invested Capital*

** Revenues – Direct Costs = Revenues – Variable Costs – Direct Fixed Costs*

Which statement about Corporate Costs is correct?

Corporate Costs can be distinguished into three main groups: direct costs, indirect costs, and period costs.

Corporate Costs can be allocated to Business Units using the following approaches: a market-based approach or a cost-based approach; the cost-based approach can rely on either actual or standard costs.

A partial corporate cost allocation based on proportional allocation drivers allows to fairly allocate costs related to spare capacity among the Business Units

A partial corporate cost allocation based on fees should be preferred in the case of costs related to spare capacity.

Which statement on reporting at the BU level is FALSE:

To isolate the performance of BUs within the company, two specific problems must be addressed: the existence of intercompany exchanges and the presence of resources used by the BUs that are managed at the corporate level

To meet the “specific responsibility” requirement for reporting at the BU level, companies must allocate all corporate costs to the BUs

The existence of intercompany exchanges has fiscal implications when the BUs, belonging to the same group, are autonomous juridical entities located in different countries.

When using non-financial indicators at the BU level, it is convenient to identify indicators that isolate specific responsibilities of each BU

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