



POLITECNICO
MILANO 1863

Non financial : carbon footprint, delivery rate, ...

Accounting, Finance & Control

Financial Indicator

Value Drivers & *SCORECARDS*



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Enterprise Value (EV) and Day-by-Day

Accounting based indicators

- max ROE
- max ROI
- max Cash Flow from Operations

what for every day actions ?????

VALUE based indicators

$$\max \sum_{t=1}^T \frac{FCFF(t)}{(1 + WACC)^t} + \frac{TV(T)}{(1 + WACC)^T}$$

What goals?
What actions
day-by-day?

TIMELINESS !!!
SPECIFIC RESPONSIBILITIES !!!



The “Value” Tree

our Tool

increase !!! (middle line)

ENTERPRISE VALUE

FREE CASH
FLOWS TO FIRM

COST OF
CAPITAL

TERMINAL
VALUE

CASH FLOWS

CAPEX

VALUE-BASED INDICATORS

EBITDA

OPERATING
WORKING CAPITAL

ACCOUNTING-BASED INDICATORS

REVENUES

CASH COSTS

RECEIVABLES

PAYABLES

INVENTORIES

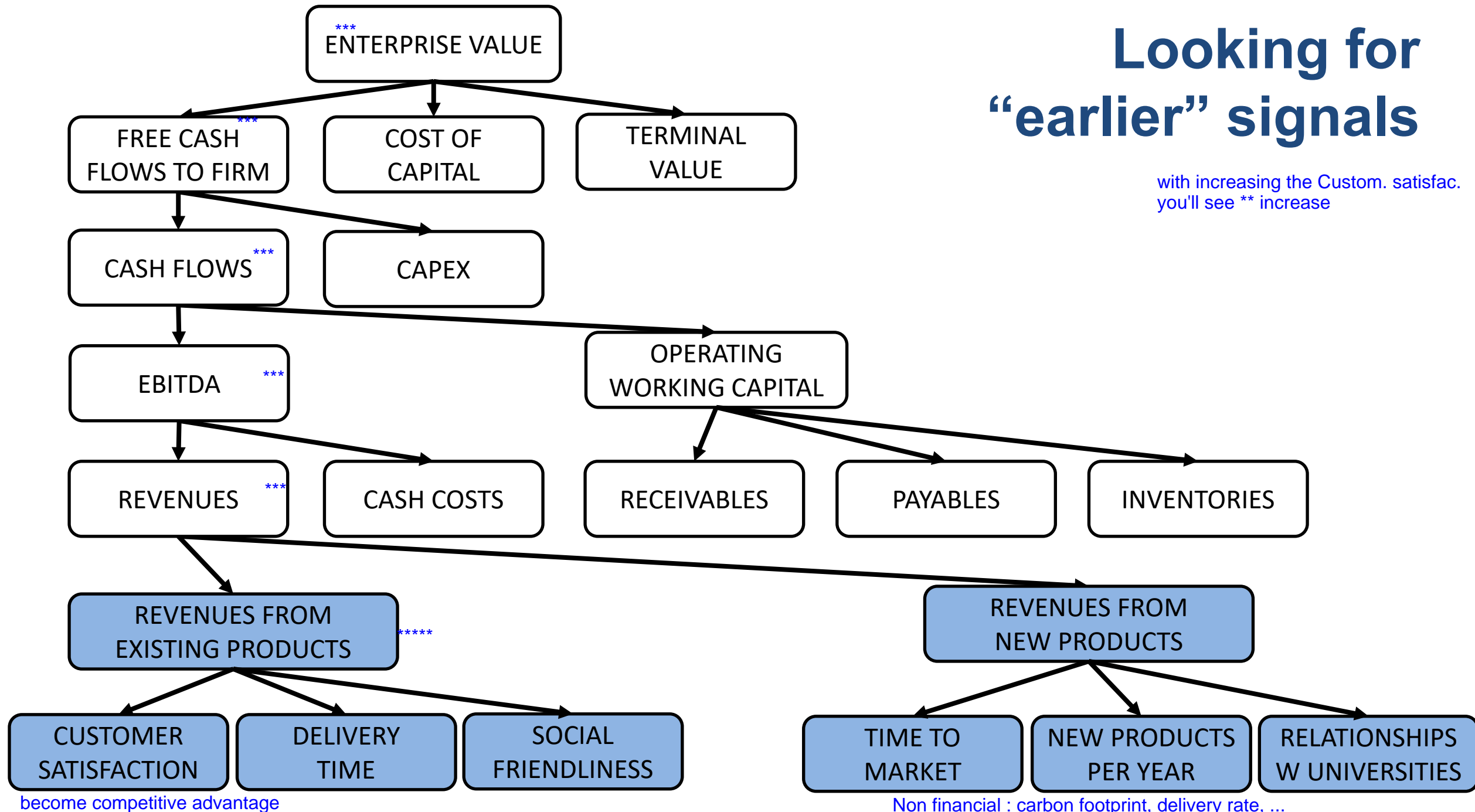
Not depreciation, cost
that makes cash outflow
cost in IS without the D&
A

Use in Companies (data from Italy)

Techniques	Usage	
	# firms	% firms
Budget	81	96,4%
Traditional financial ratios	72	85,7%
Benchmarking	51	60,7%
DCF <small>value base indicator</small>	40	47,6%
Functional costing	39	46,4%
Balanced Scorecard	33	39,3%
PC	30	35,7%
JOB/JOC	29	34,5%
EVA	28	33,3%
Quality cost	26	31,0%
Environmental cost	25	29,8%
OC	23	27,4%
ABC/ABM	22	26,2%
Throughput Accounting	8	9,5%
JIT	7	8,3%

Looking for “earlier” signals

with increasing the Custom. satisfac.
you'll see ** increase

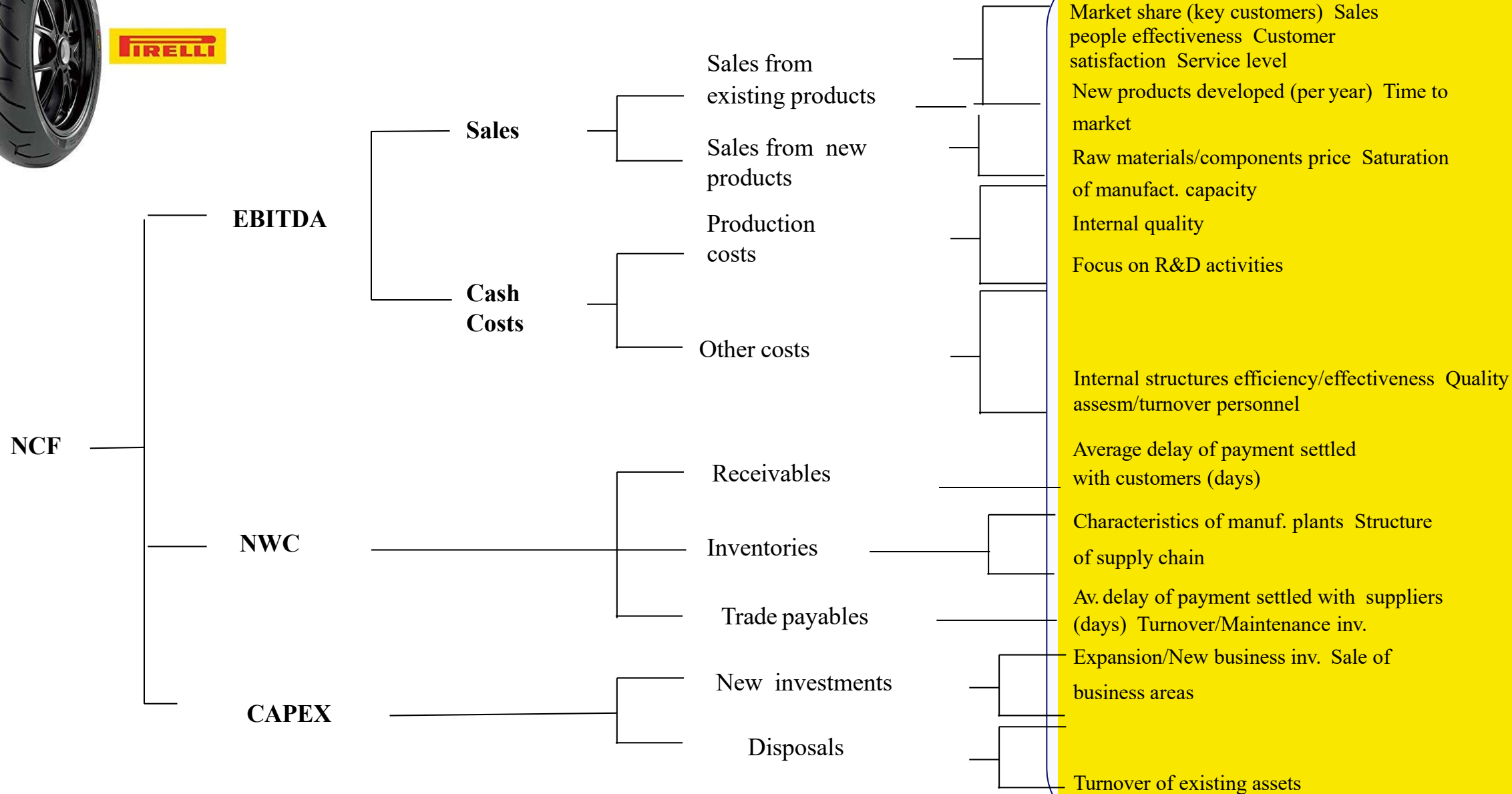


The trap of too many indicators !!!





The PIRELLI “Value-Tree”



The “Value” Tree

ENTERPRISE VALUE

FREE CASH
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INVENTORIES

PERFORMANCE DRIVERS

- Time
- Quality
- Productivity
- Flexibility
- Environment & Society

RESOURCE DRIVERS

- Money
- Technology
- Human Resources
- Image & Reputation

KEY RISK INDICATORS

- Micro
- Meso
- Macro

VALUE DRIVERS

non financial

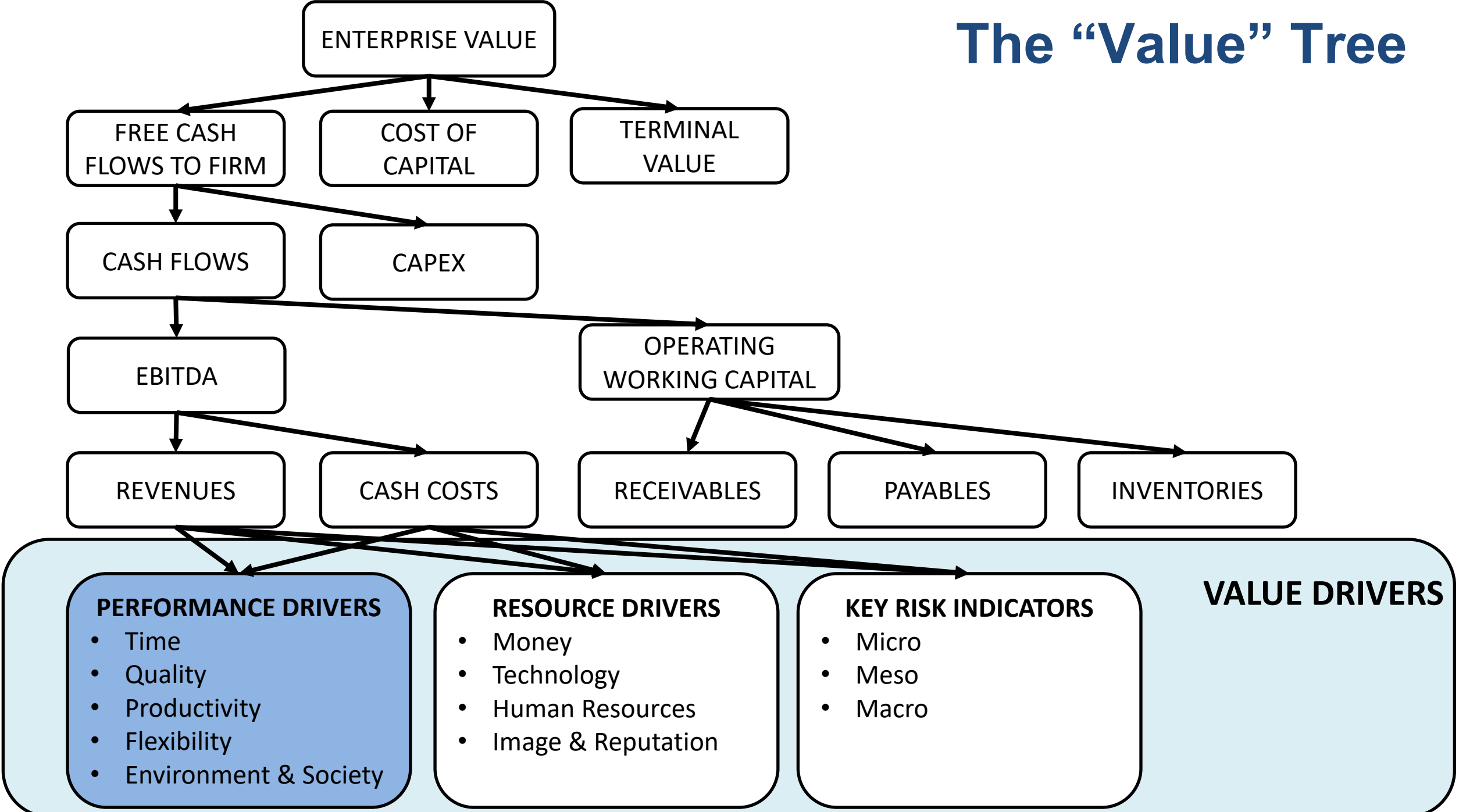
Value Drivers

- Value Drivers refer to indicators which provide Managers with **EARLIER SIGNALS** (drivers) of value creation
- Drivers are endless and company-specific.

However, they can be grouped in three main typologies :

- Indicators (mainly non financial) of the present *performance* of the enterprise
- Indicators (mainly non financial) of the *resource state*, that measure the potentiality of the enterprise's current resources to generate future value-added projects
- Drivers of *risks*, that provide early signals about what might happen in the next future and allow managers to anticipate potential risks and implement corrective actions

The “Value” Tree



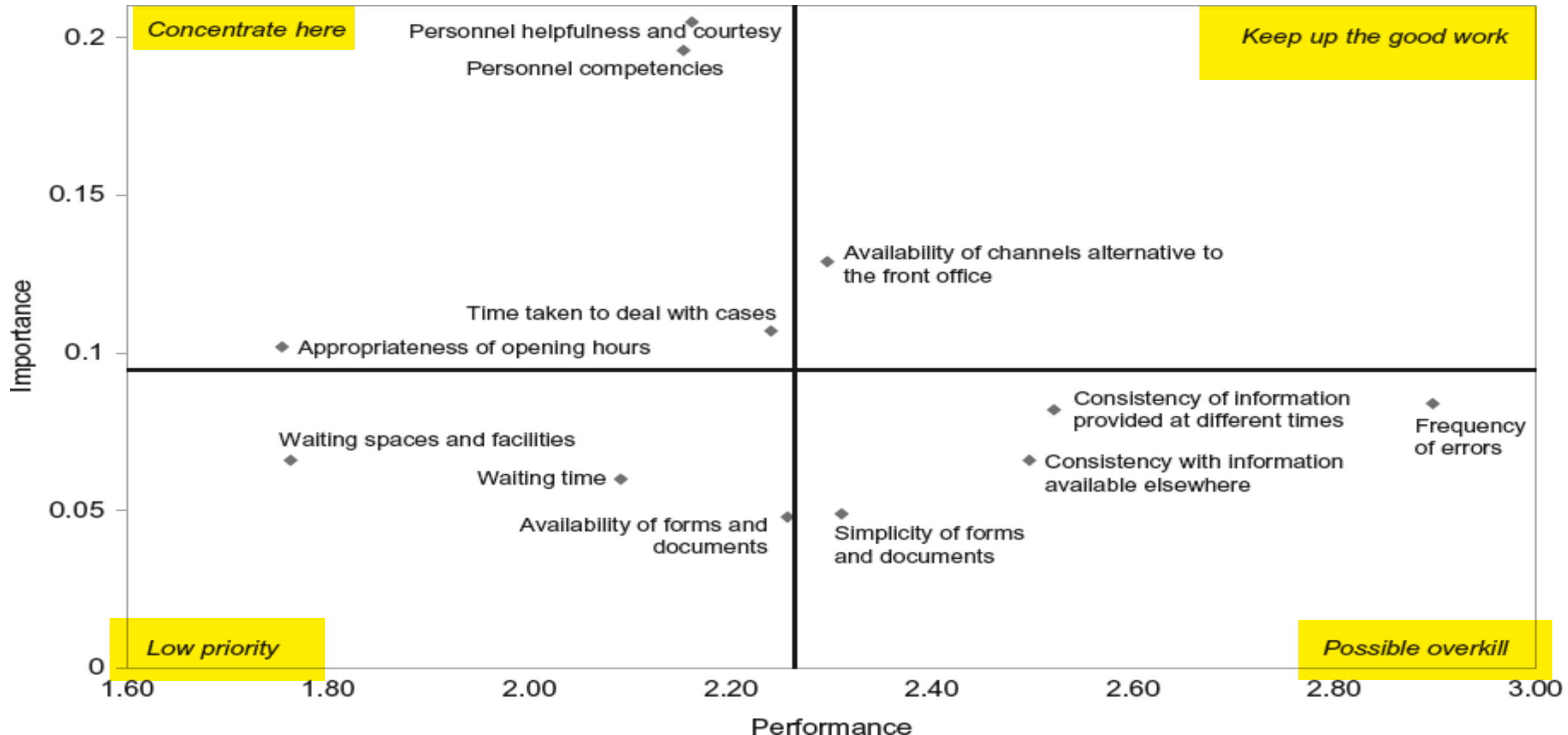
Performance Drivers

<div>Focus</div> <div>Competitive Factor</div>	REVENUES DRIVERS → MAX Revenues → ↑ SPU AND ≈ Sales → ≈ SPU AND ↑ Sales	COST DRIVERS → MIN COGS → ↓ full product cost per unit
Time		
Quality		
Productivity		
Flexibility		
Environment & Social Responsibility		

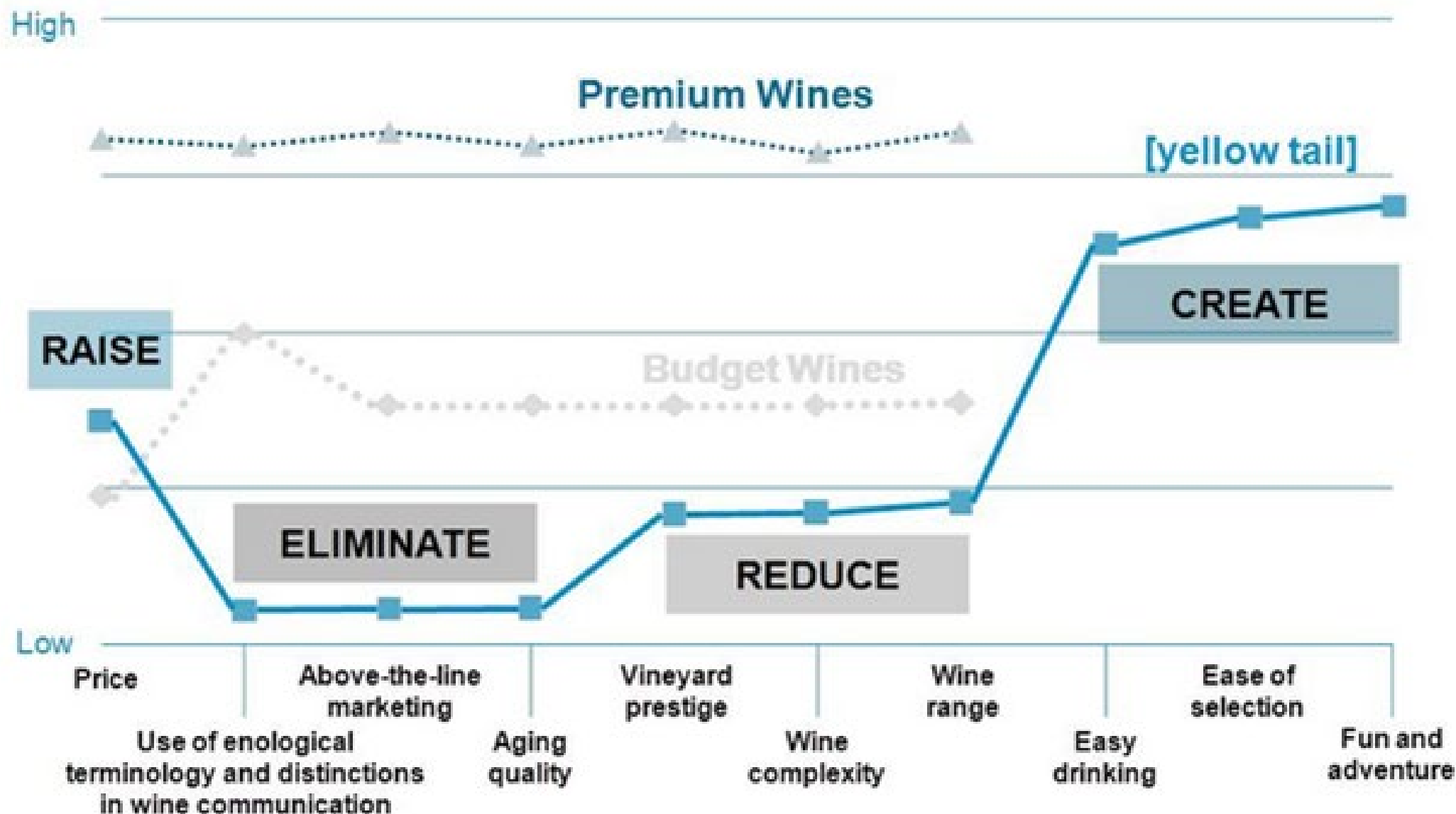
Performance Drivers

<div> <div></div> <div><i>Focus</i></div> <div><i>Competitive Factor</i></div> </div>	REVENUES DRIVERS → <i>MAX Revenues</i> → <i>↑ SPU AND ≈ Sales</i> → <i>≈ SPU AND ↑ Sales</i>	COST DRIVERS → MIN COGS → ↓ full product cost per unit
Time	Time To Market (TTM) Time To Order (TTO)	Cycle Time (Throughput Time)
Quality	Claims number Customer Satisfaction	Spoilage percentage Hours for reworks
Productivity		Assets efficiency Labour productivity
Flexibility	Delayed Choices Product Range	Time of Change Skills Range
Environment & Social Responsibility	Emission level Product compliance	Energy savings

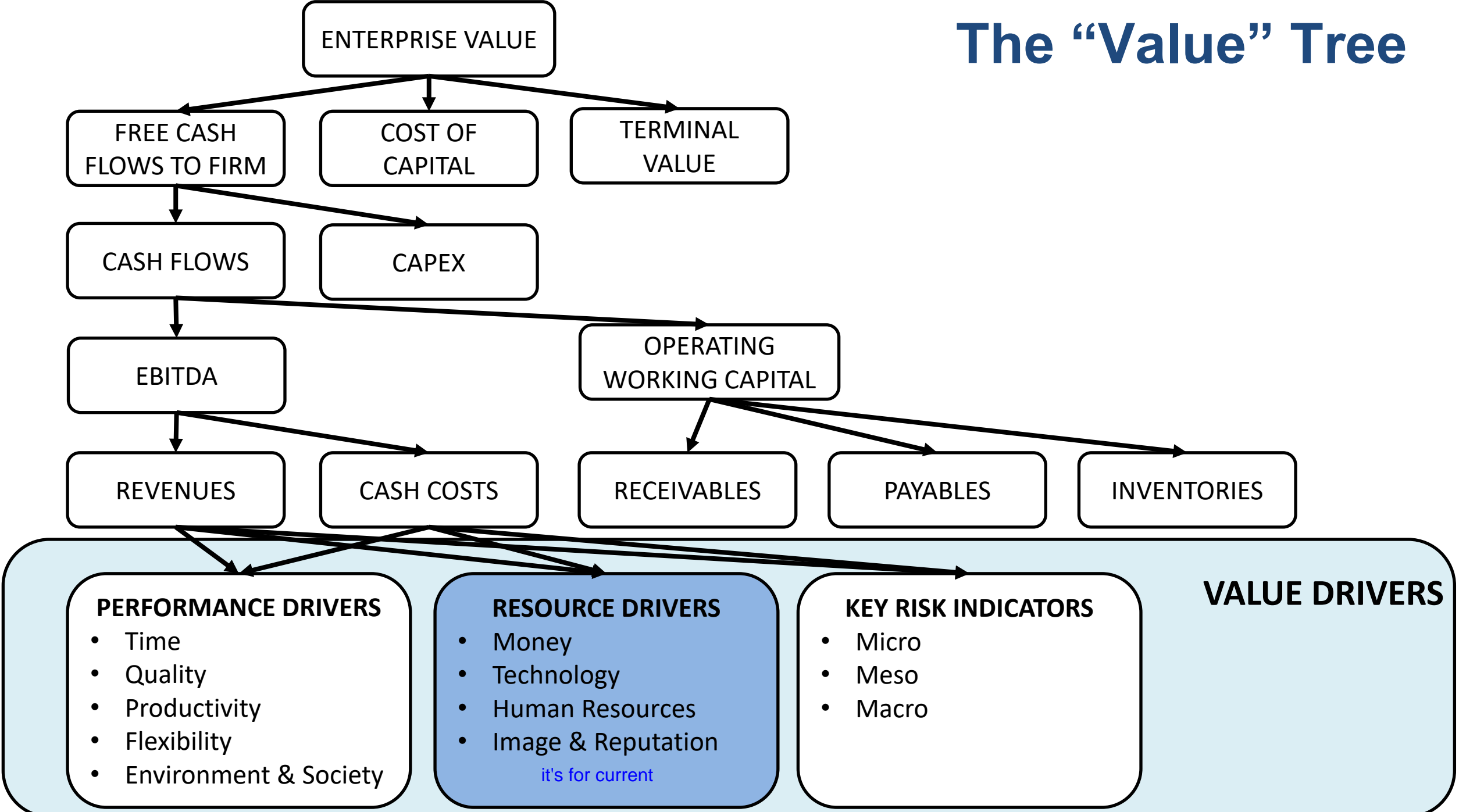
Relevance vs Performance : an example from POLIMI



An echo to Blue Ocean Strategy



The “Value” Tree



Resource State Drivers (i)

- Indicators of **Resource State** aims at capturing potentialities for enterprises to innovate and grow in the medium-long term
- In spite of the different labels and clusters, 4 types of resources should be considered:
 - Financial
 - Technological
 - Human & Organizational
 - Image & Reputation
- The “state” of each resource should be assessed against 3 types of measures:
 - Quantity
 - Quality
 - Accessibility

Resource State Drivers (ii)

RESOURCE	FINANCIAL	TECHNOLOGICAL	HUMAN & ORGANIZATIONAL	IMAGE & REPUTATION
QUANTITY	BANK DEBTS	TOTAL PATENTS AWARDED OR PENDING	# FTE EMPLOYEES BY ROLE	# OF SOCIAL INITIATIVES
QUALITY	AVERAGE COST OF DEBT (Kd)	INCIDENCE OF NEW PRODUCT SALES	# FTE EMPLOYEES WITH PHD/MBA	BRAND EQUITY
ACCESSIBILITY	FINANCIAL LEVERAGE (D/E)	RELATIONSHIPS WITH RESEARCH CENTRES	EDUCATION LEVEL IN THE NEIGHBORHOUGHTS	NUMBER OF FOLLOWERS

Resource State Drivers (iil)

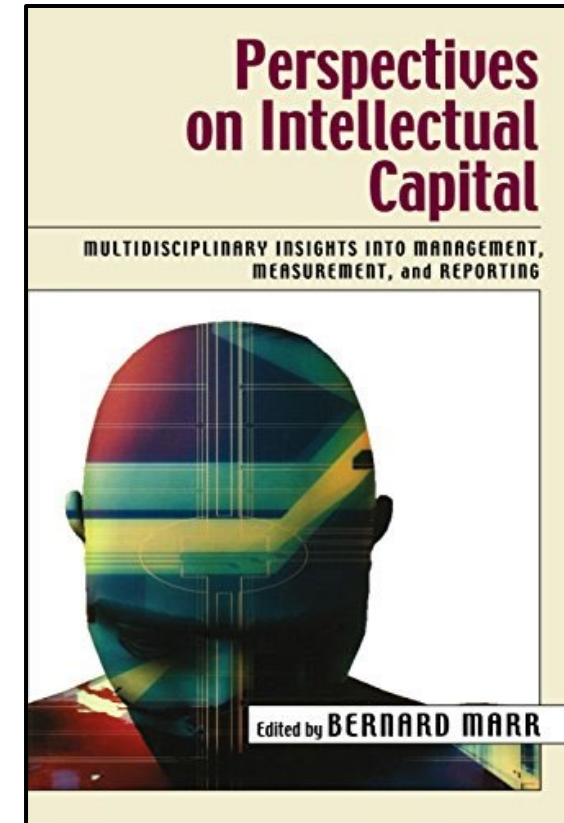
RESOURCE	FINANCIAL	TECHNOLOGICAL	HUMAN & ORGANIZATIONAL	IMAGE & REPUTATION
QUANTITY	FINANCIAL POSITION	TOTAL PATENTS AWARDED OR PENDING	# FTE EMPLOYEES BY ROLE	# OF SOCIAL INITIATIVES
QUALITY	AVERAGE COST OF DEBT (Kd)	INCIDENCE OF NEW PRODUCT SALES	# FTE EMPLOYEES WITH PHD/MBA	BRAND EQUITY
ACCESSIBILITY	FINANCIAL LEVERAGE (D/E)	RELATIONSHIPS WITH RESEARCH CENTRES	EDUCATION LEVEL IN THE NEIGHBORHOUGHS	NUMBER OF FOLLOWERS

INTELLECTUAL CAPITAL

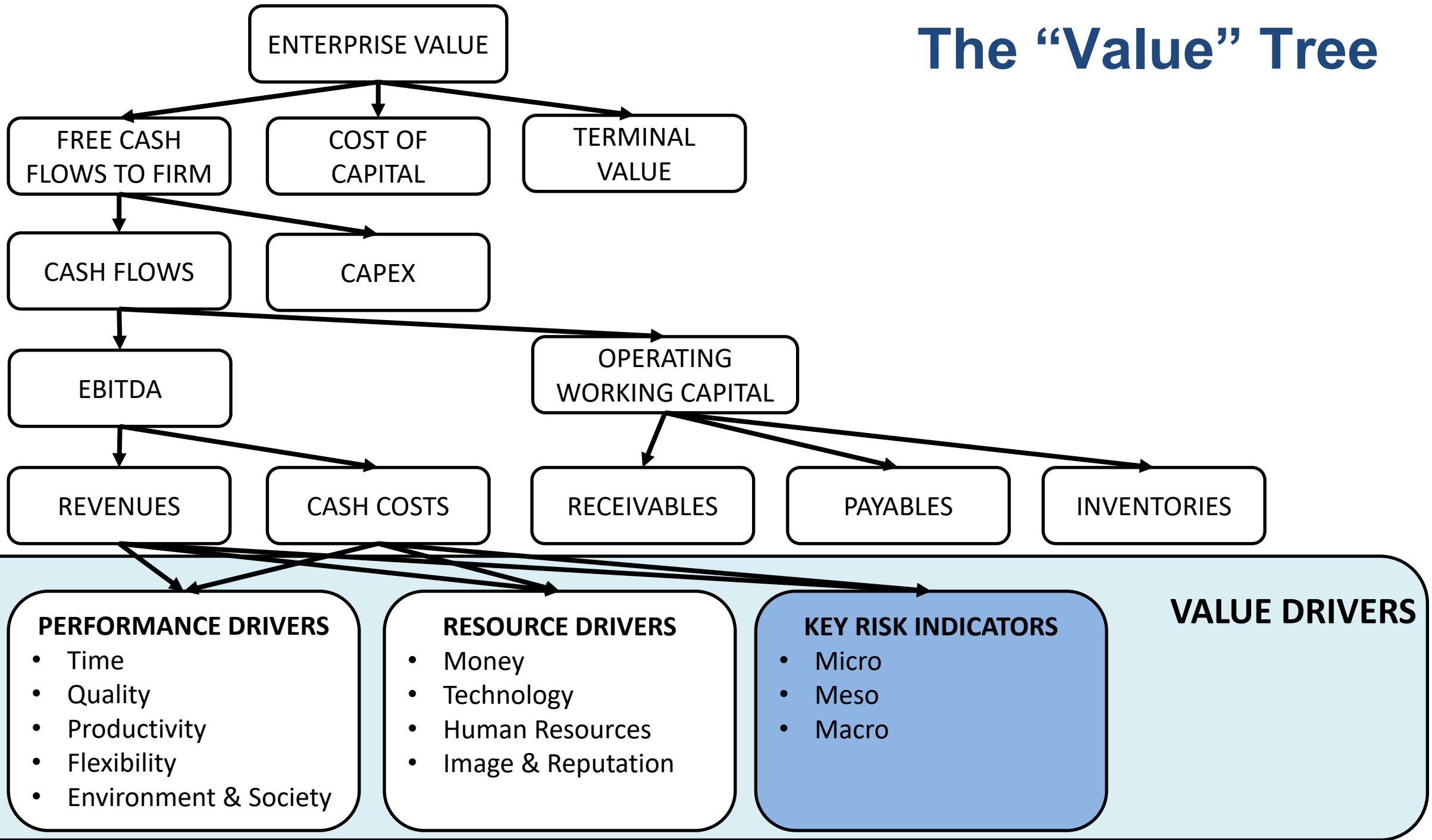
Intellectual Capital

Intellectual capital joins different types of intangible assets and it has three main dimensions:

- **HUMAN CAPITAL**, which refers to the skills, training, education, experience, quantity and quality of employees
- **(internal) STRUCTURAL CAPITAL**, which refers to intangible assets and knowledge embedded in organisational structures and processes; this dimension comprises patents, research and development, technology
- **RELATIONAL CAPITAL** encompasses relationships with customers and suppliers, brand names, trademarks and reputation. network that can be leveraged



The “Value” Tree



Key Risk Indicators (KRIs)

Key Risk Indicators (KRI) are defined as metrics that allow managers to monitor and anticipate the impact of one or more **adverse events (risks)** that might influence negatively the capability of an enterprise to reach its goals.

Typically, they refer to three typologies:

- ✓ **MICRO-ENVIRONMENT**: drivers that refer to the company's internal environment (e.g., employees' satisfaction; absenteeism; machine failures etc.)
- ✓ **MESO-ENVIRONMENT**: drivers that cover the company's perimeter, such as suppliers, distributors, customers (e.g., potential for vertical integration)
- ✓ **MACRO-ENVIRONMENT**: drivers that refer to the macro-economic context and the global market (e.g., PEST analysis)

Characteristics of Value Drivers

- **TIMELINESS** – high; this is the main advantage of these measures
- **LONG-TERM ORIENTATION** – it can be high if the right indicators are selected, e.g., those aligned to competitive advantages
- **MEASURABILITY** – it might be ambiguous; this problem is solved by implementing a protocol for each indicator where the following information is clarified:
 - *Measure: Title of the measure*
 - *Purpose: Why does the company want to measure this?*
 - *Formula: How this measure must be measured?*
 - *Unit of analysis: which is the object of measurement?*
 - *Frequency: How often does the company measure this?*
 - *Sources of data: From where data can be collected?*
- **COMPLETENESS** – each indicator refers to a specific factor (no synthetic measure)
- **SPECIFIC RESPONSIBILITIES** – high; measures related to day-by-day

Characteristics of all Indicators

Characteristics	VALUE-BASED	ACCOUNTING-BASED	VALUE DRIVERS
Completeness	+++	++	++
Measurability	+	++	++
Long term oriented	+++	+	++
Timeliness	+	+	+++
Specific responsibilities	+	+	+++



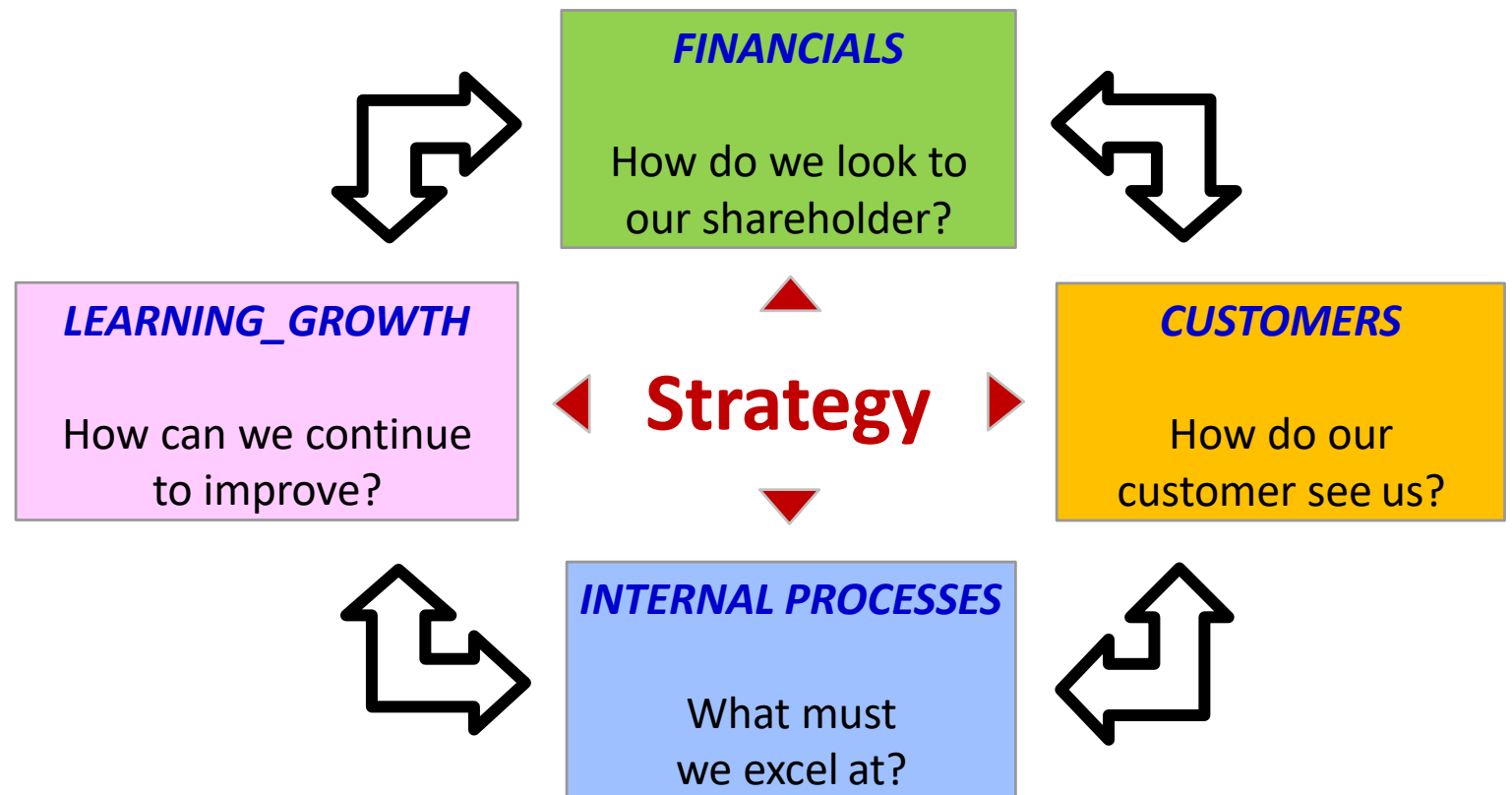
Indicators from all three groups should be considered to inform managers' decision-making



Balanced Scorecards (1st generation)

The Balanced Scorecards suggest to identify relevant indicators on four perspectives:

- *Financials*
- *Customers*
- *Internal processes*
- *Learning & Growth*

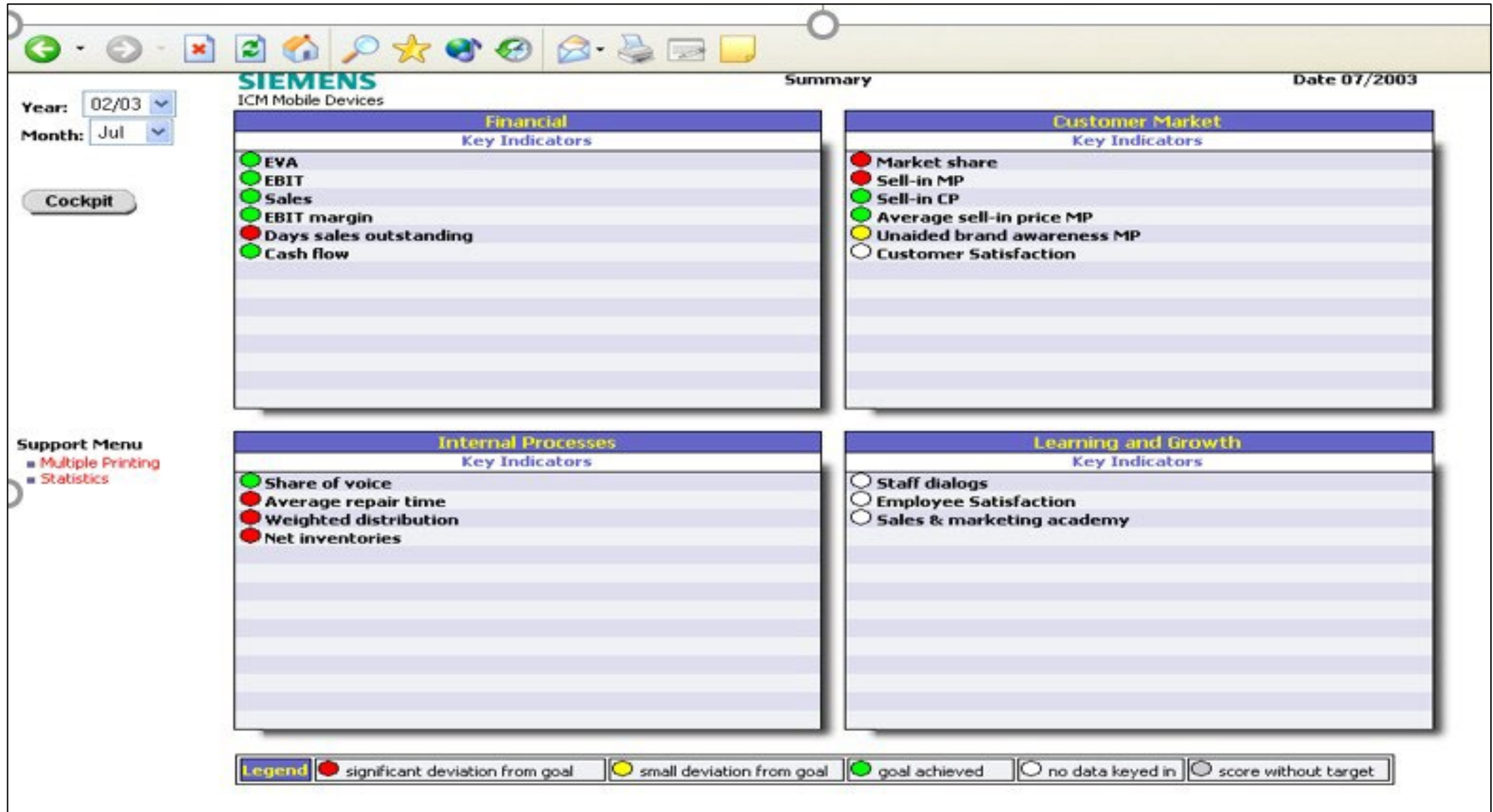


Balanced Scorecards (1st generation)

- The **FINANCIAL PERSPECTIVE** analyses the company trend towards shareholders with reference to:
 - Long-term Value (EV, E)
 - Profitability (ROE, ROI, EBIT)
 - Cash Generation (Cash Flow)
- The **CUSTOMER PERSPECTIVE** highlights performance about the relation with the market:
 - Size (market share, sales)
 - Delivery time
 - Customer satisfaction
- The **INTERNAL PROCESS PERSPECTIVE** includes measures oriented to the control of internal efficiency:
 - Average cost per unit
 - Productivity
 - Cycle Time
- The **LEARNING & GROWTH PERSPECTIVE** shows the innovative capability of the company:
 - Time to Market
 - Learning curve
 - Competencies

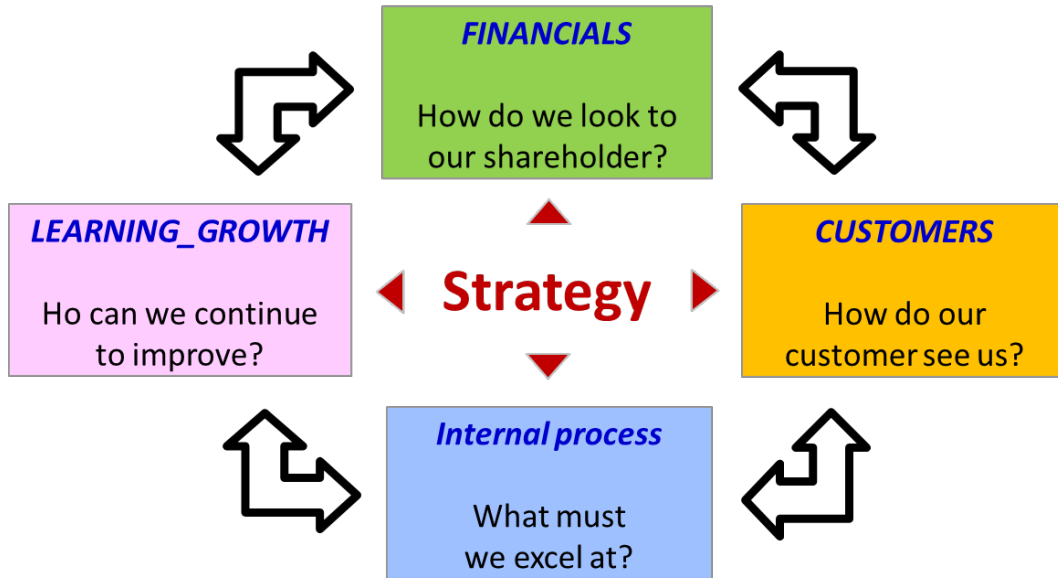
Balanced Scorecards (1st generation)

connection is missing



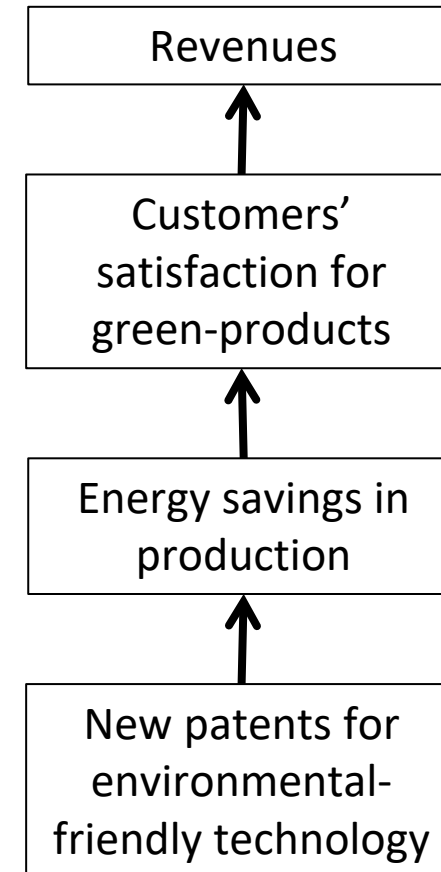
Is Balance good?

Rhetoric: “Balance is good”



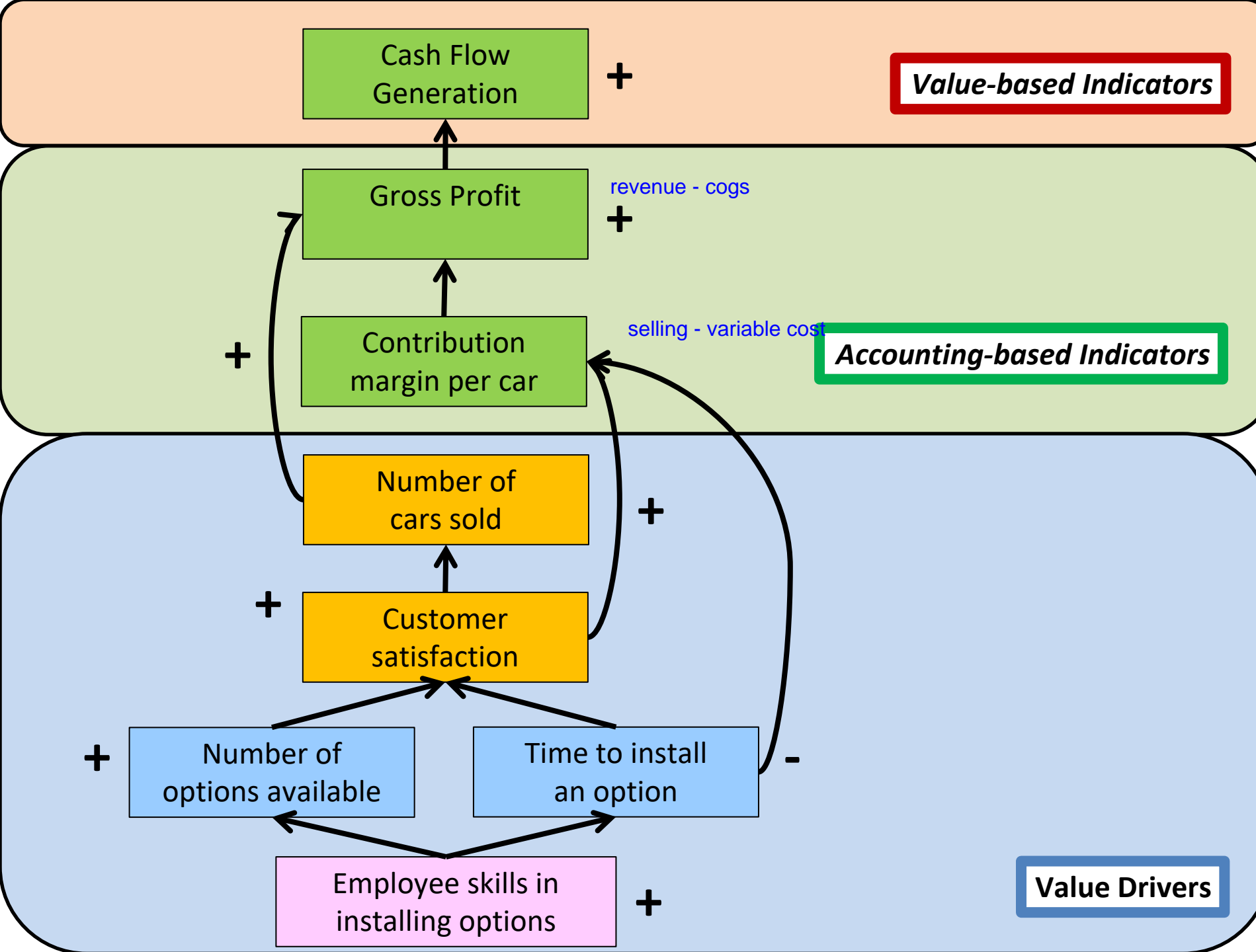
useless

Reality: “Balance is irrelevant;
causality matters”



logical chain

color in the next slide shows the logical chain



Case studies on WeBeep (with solutions)

Case Studies:

- “Powder 8 Lodge”
- Applied Pharmaceuticals vs Destination Resorts



Value drivers are defined as earlier predictors of value generation because...

They are interconnected in cause-effect relationships in balanced scorecards

They monitor both current performance and resources of an enterprise

They provide managers with timely relevant information

They offer a more comprehensive overview of company's performance

None of the above