

***Regional Seminar on the economic and financial
aspects of telecommunications Study Group 3
Regional Group for Latin America and Caribbean
(SG3RG-LAC)***

Costs and tariff methodologies

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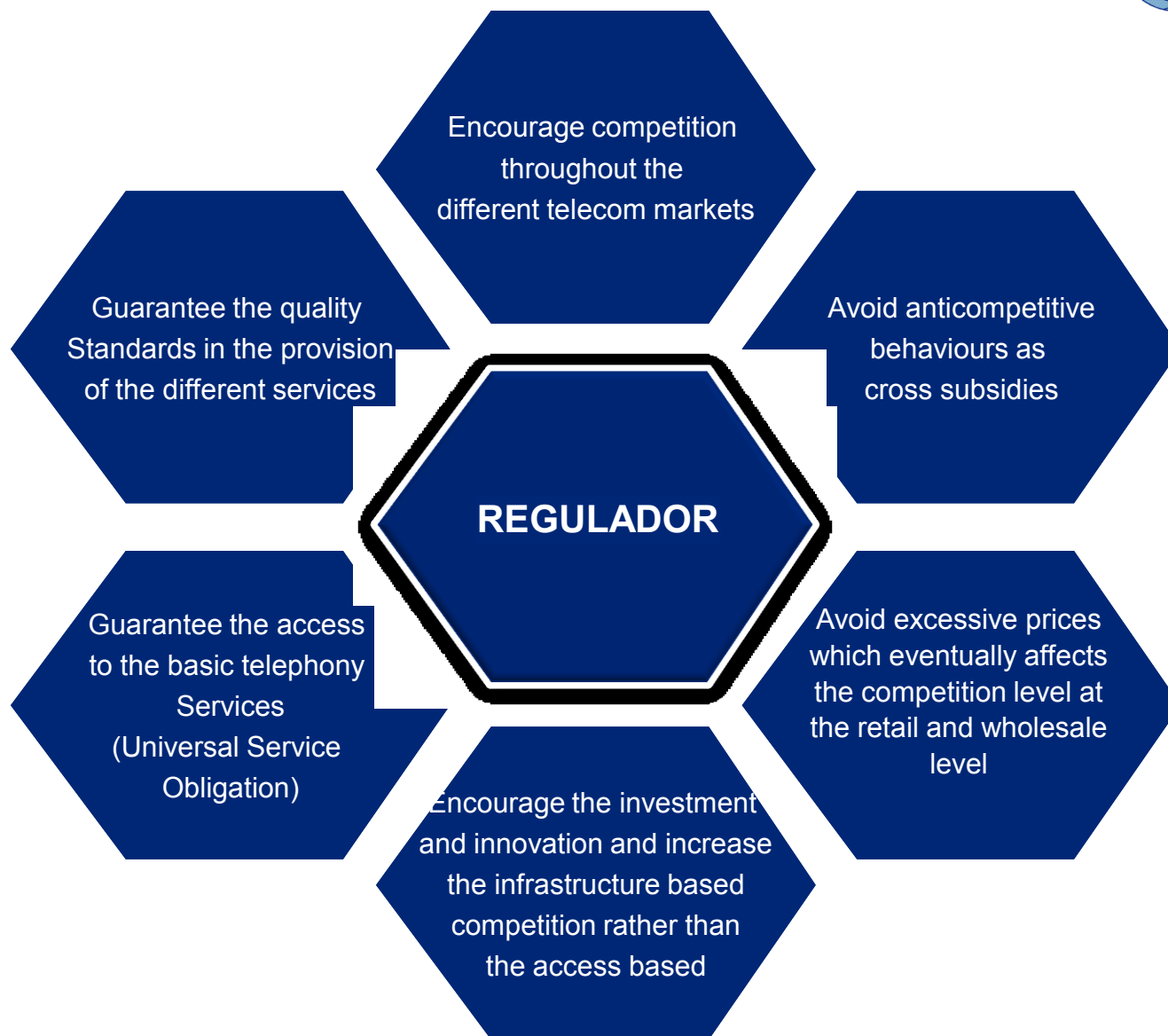
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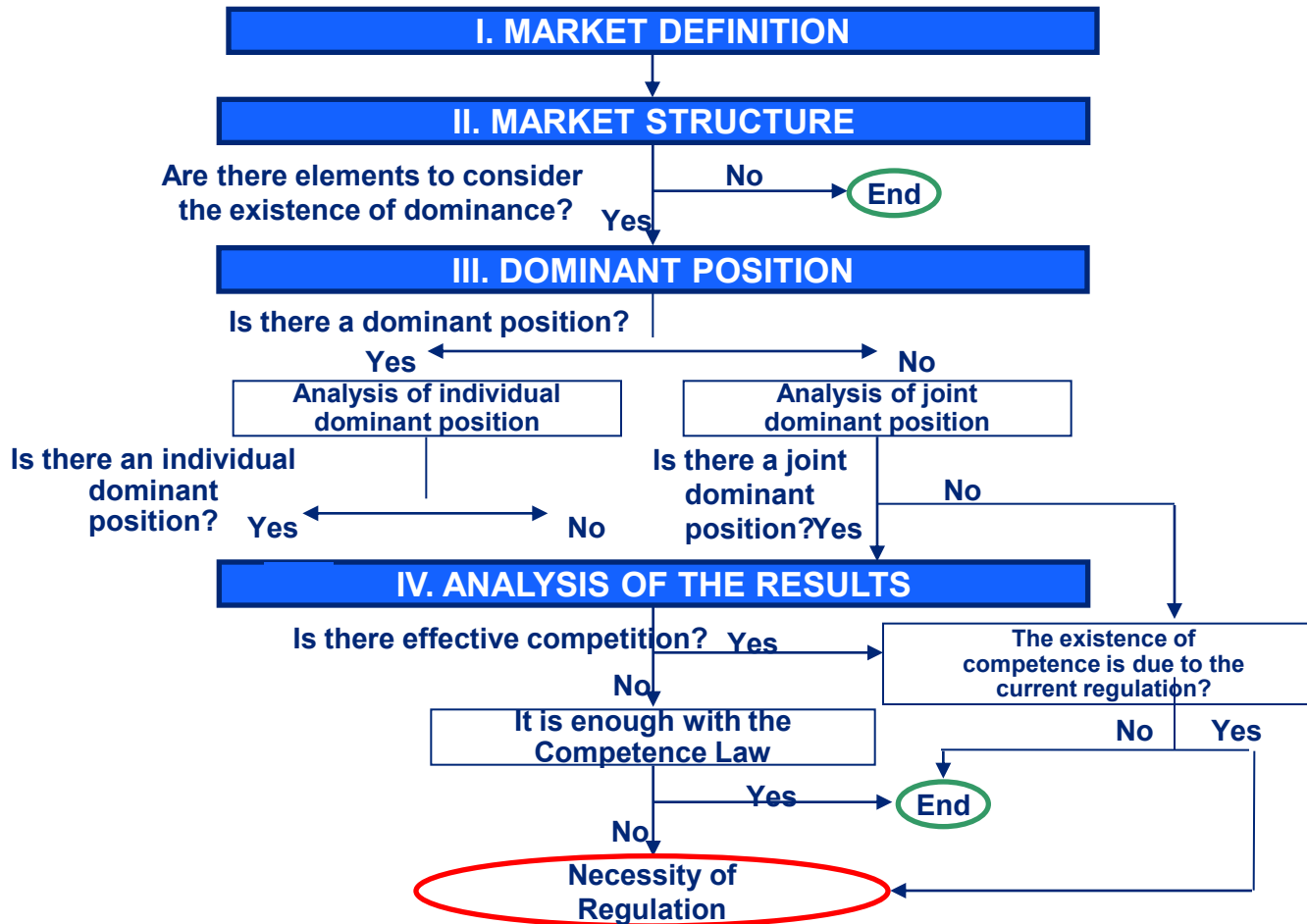
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1. Why regulate? Why cost accounting?

Why regulate? Why cost accounting?



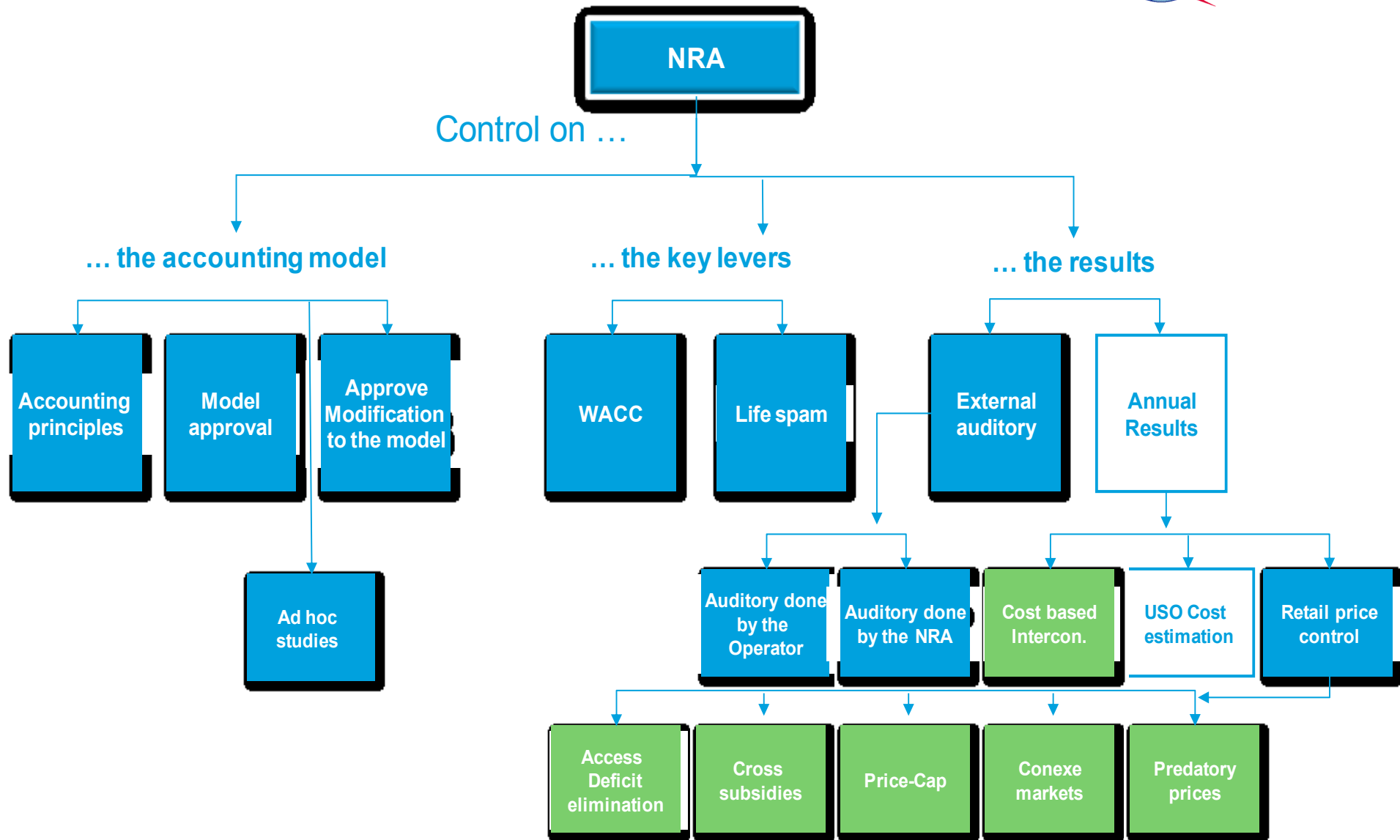
Why regulate? Why cost accounting?



Typology of ex ante remedies:

- Price control: Cost based vs reasonable prices
- Accounting separation
- Carrier selection and preselection
- Guarantee the access to the network
- Non discrimination and transparency
- Functional separation

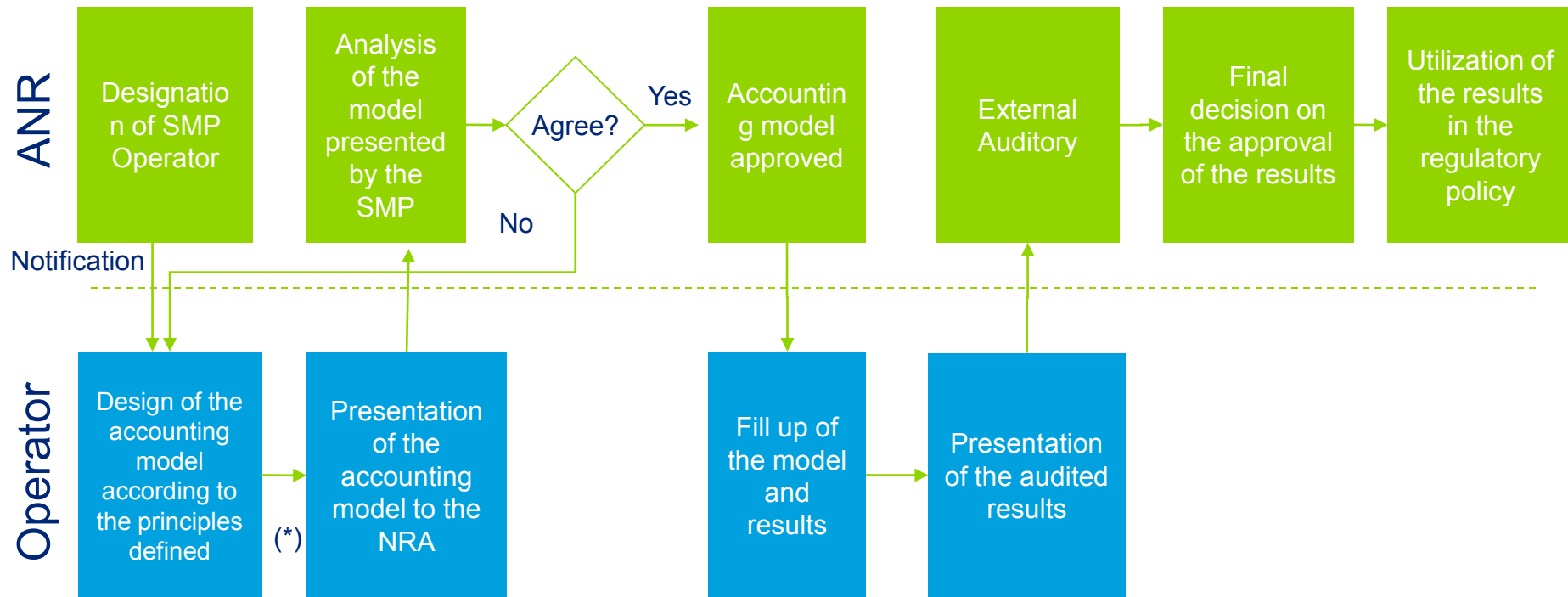
Why regulate? Why cost accounting?



- The cost model will be a key **tool to guarantee the cost based** principle so that those operators who pay interconnection are only paying for the network components that are used in the provision of the wholesale service
- The cost model will show the costs and margins associated to the different services and **guarantees that non-discrimination** occurs in the provision of the services (**transfer prices**).
- The cost model provides information which contributes to increase **transparency** and to guarantee that **no anticompetitive behaviors** occurs.

2. Steps in the design of a regulatory policy for an accounting model

Steps in the design of a regulatory policy for an accounting model



The NRA should execute control mechanisms throughout the whole production process

(*) It could take from 6 to 9 months

Steps in the design of a regulatory policy for an accounting model

Causality

The cost and revenue allocations should be made through the parameters that generate them (generating cost drivers)

Objetivity

The cost drivers must be objective and quantifiables

Transparency

The final value assigned to each service must be decomposed, by nature, in various costs

Auditabiliity

The cost system must be properly integrated with other company systems to facilitate auditability

Desagregability

Regardless of the number and order of all costs charges will go through an intermediate state called "activity centers"

Neutrality

Internal transfers will be produced at cost value and not at market value

Compromise

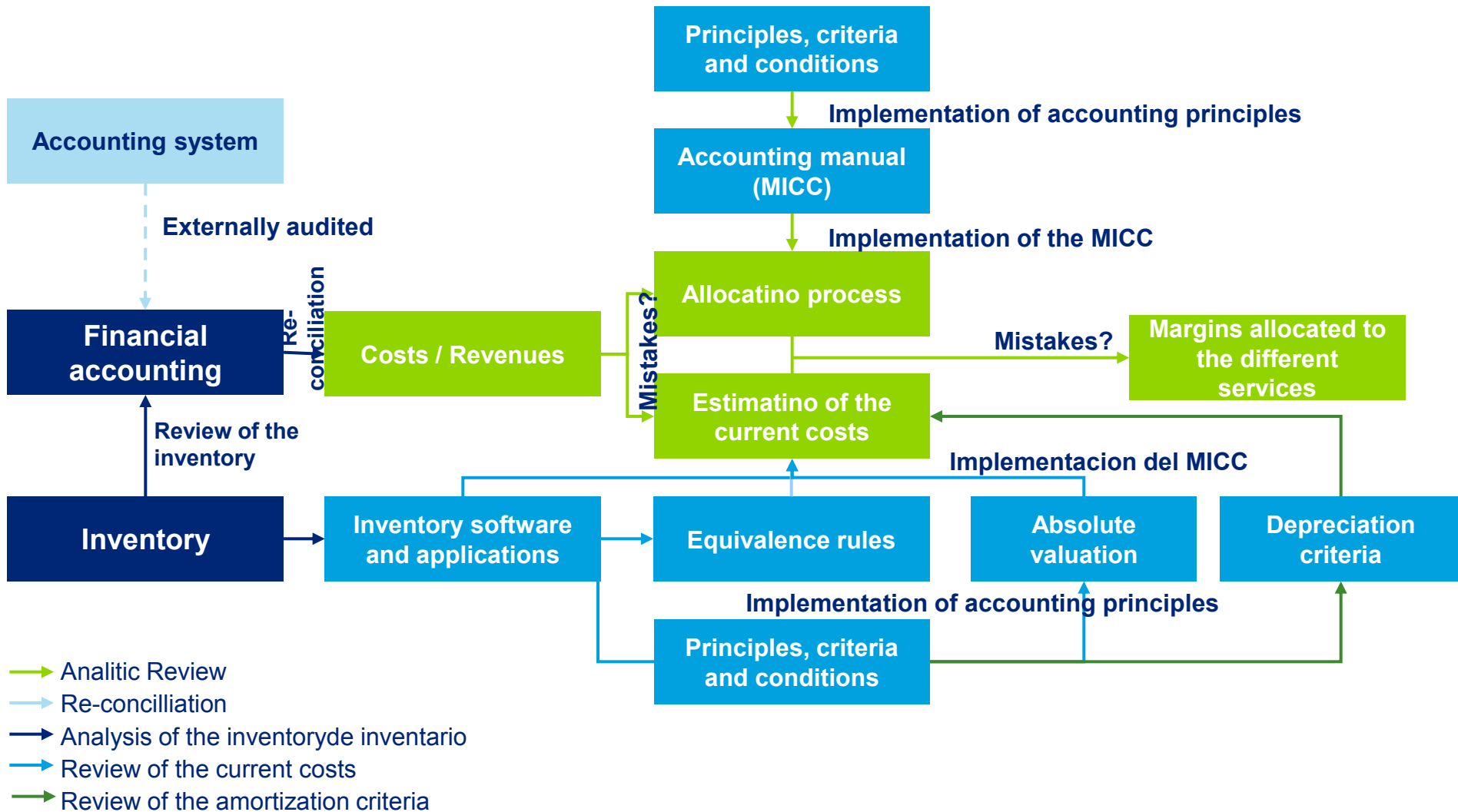
The accounting standards which requires estimations and forecast of particular variables should be on future management plans

Enough information

The cost accounting system must provide all information necessary for the regulator

In addition to the aforementioned principles, should be considered the principles of compensation and reconciliation

Steps in the design of a regulatory policy for an accounting model



3. Identification of the main levers

Definición

The WACC is defined as the average return required by the different Investors (shareholders/debt holders) who finance the investment decisions of the company

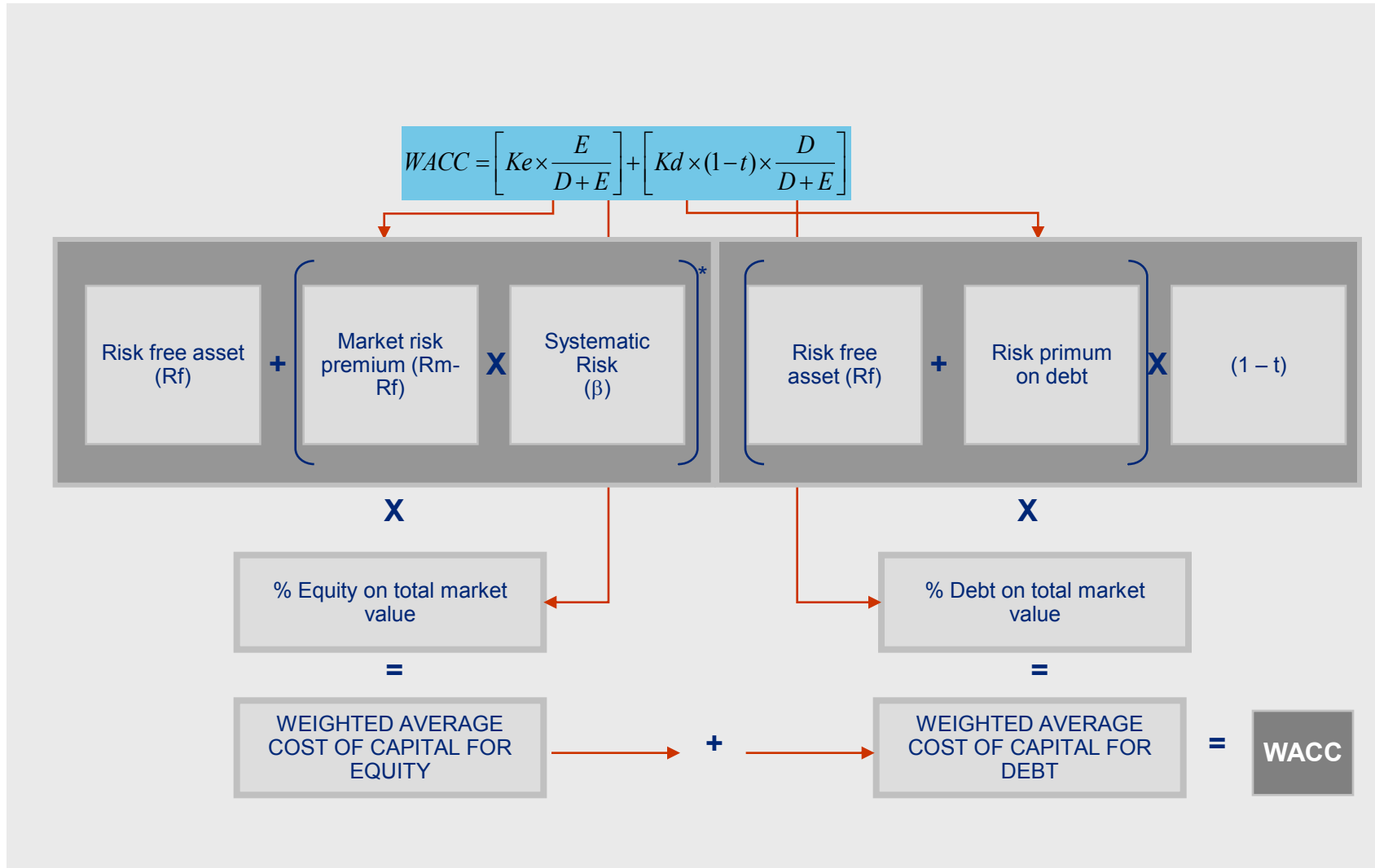
Formula

$$WACC = \left[K_e \times \frac{E}{D + E} \right] + \left[K_d \times (1 - t) \times \frac{D}{D + E} \right]$$

Componentes

- **K_e** is the return required by the shareholders
- **K_d** is the return required by the debt holders
- **E** is the market value for equity
- **D** is the market value for debt
- **$D+E$** is the market value of the company
- **t** is the tax rate

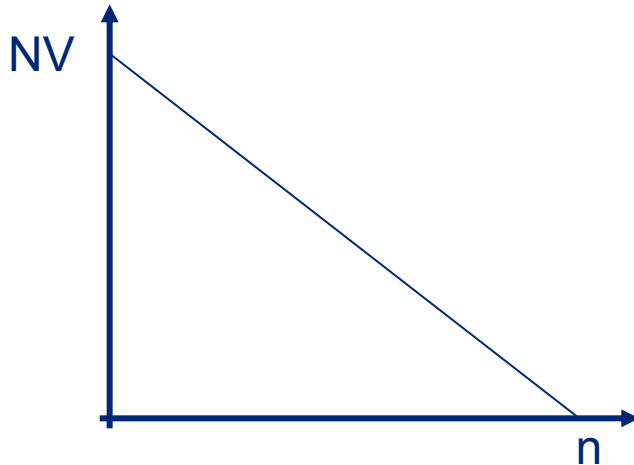
Identification of the main levers



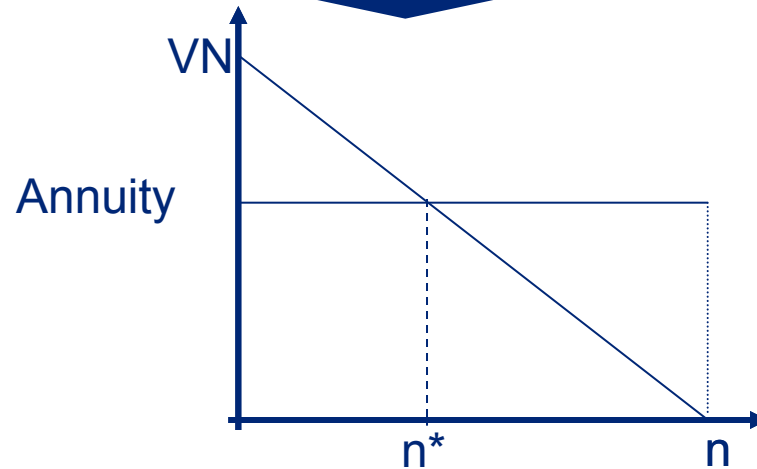
Identification of the main levers

$$CAPEX = \underbrace{(BV - \Sigma Depreciation)}_{\text{Net Value}} \cdot WACC$$

$$Annuity = \frac{BV \cdot WACC}{1 - (1 + WACC)^{-n}}$$

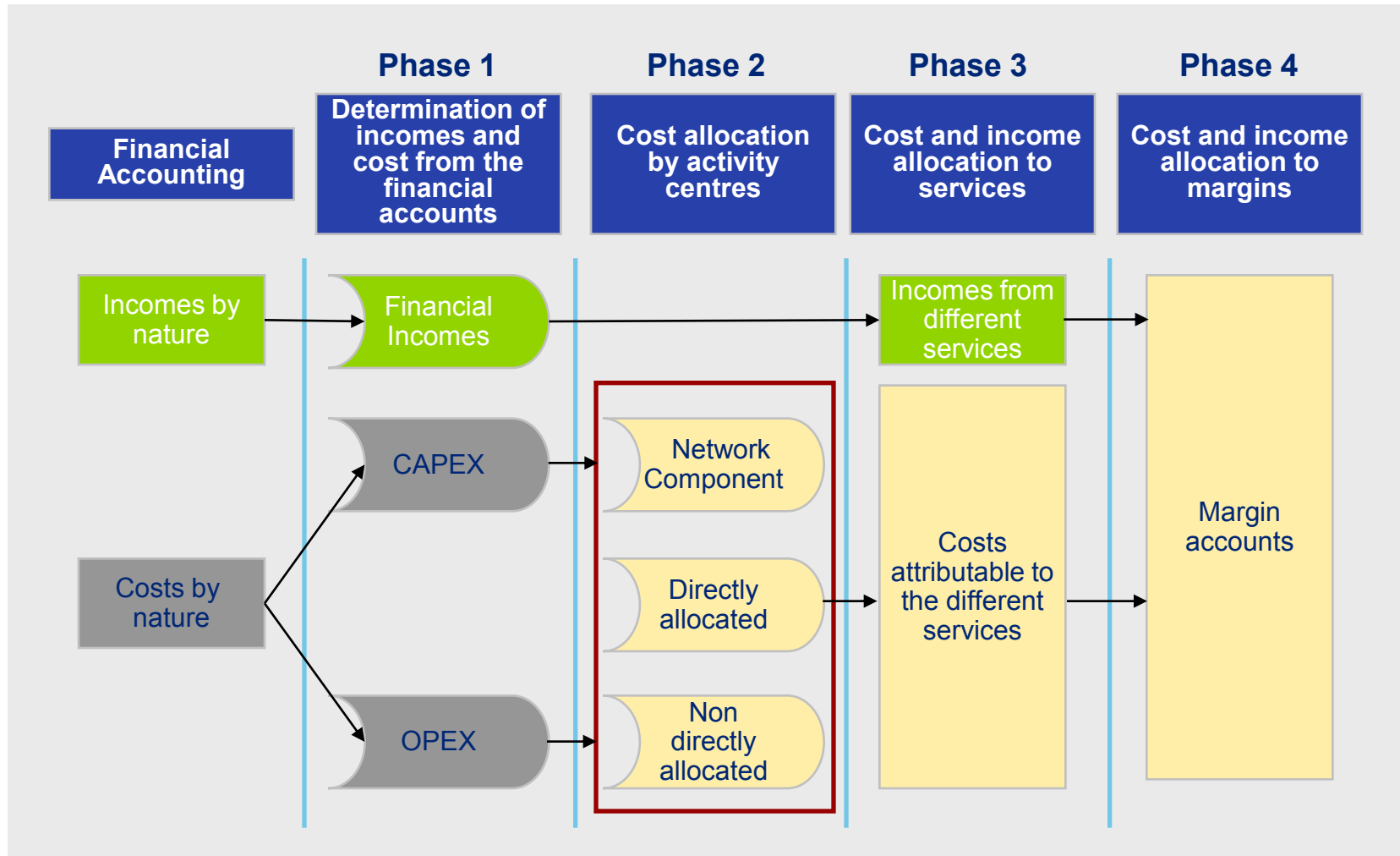


Annuity

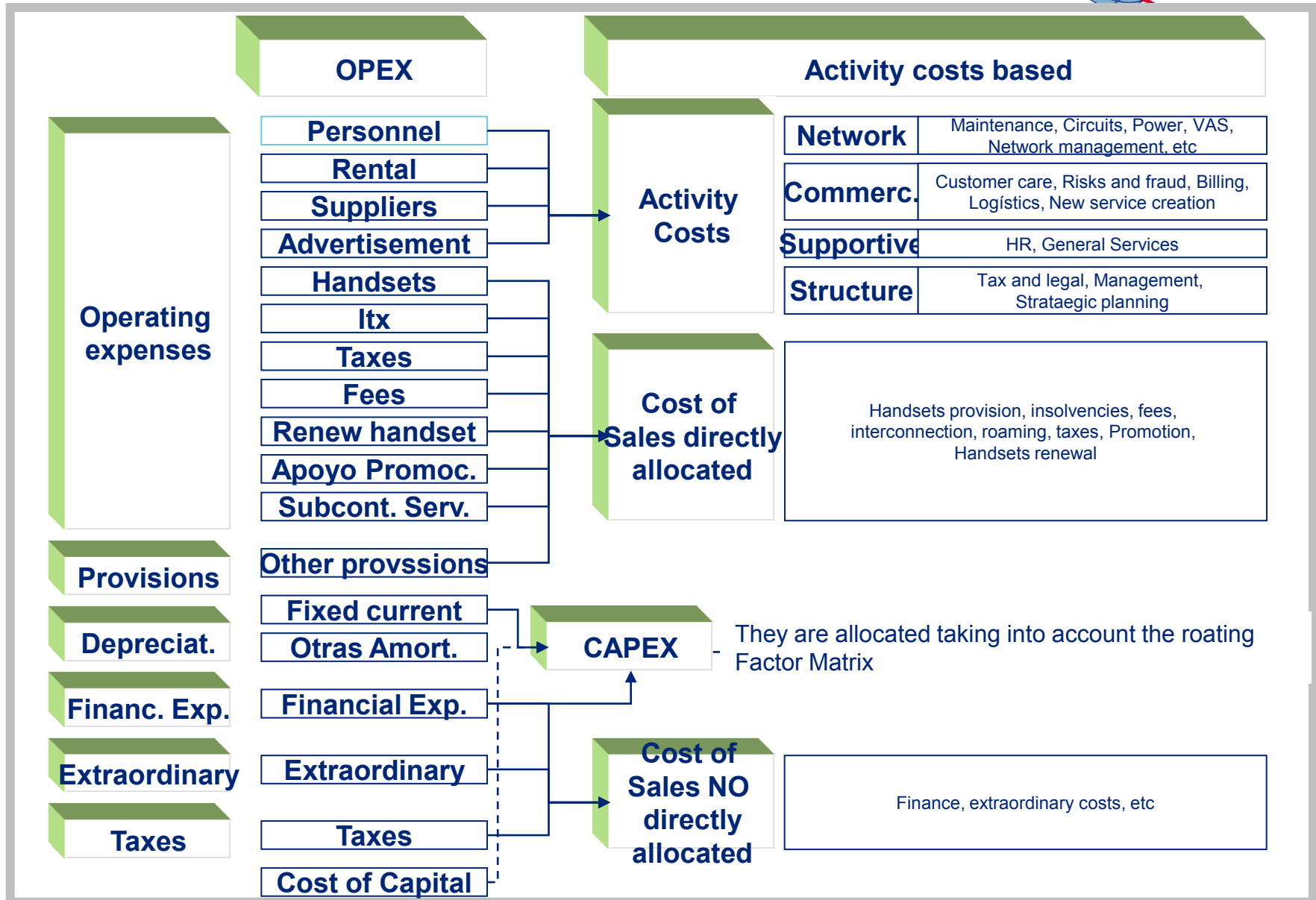


4. Phases of an accounting model

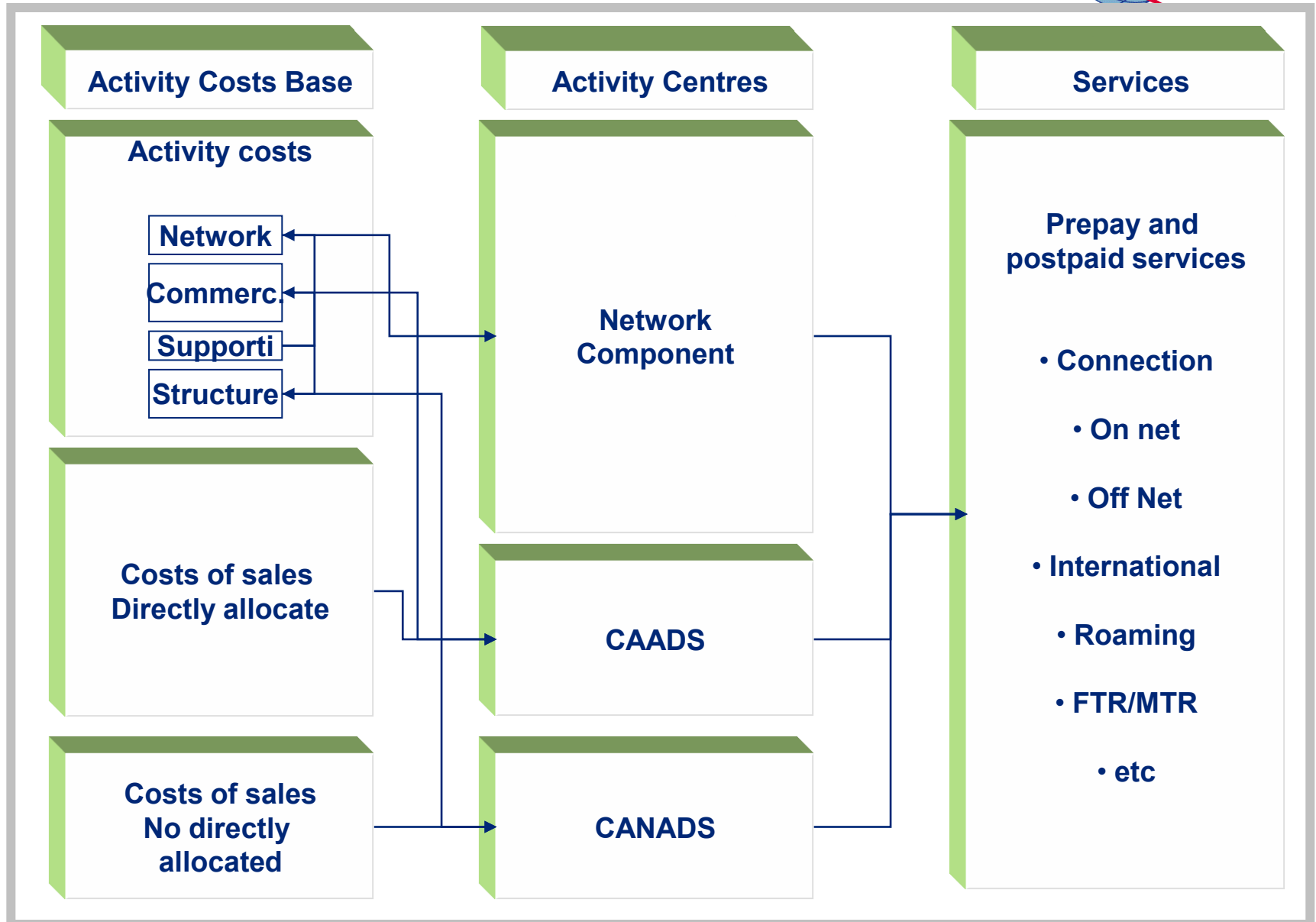
Phases of an accounting model



Phases of an accounting model

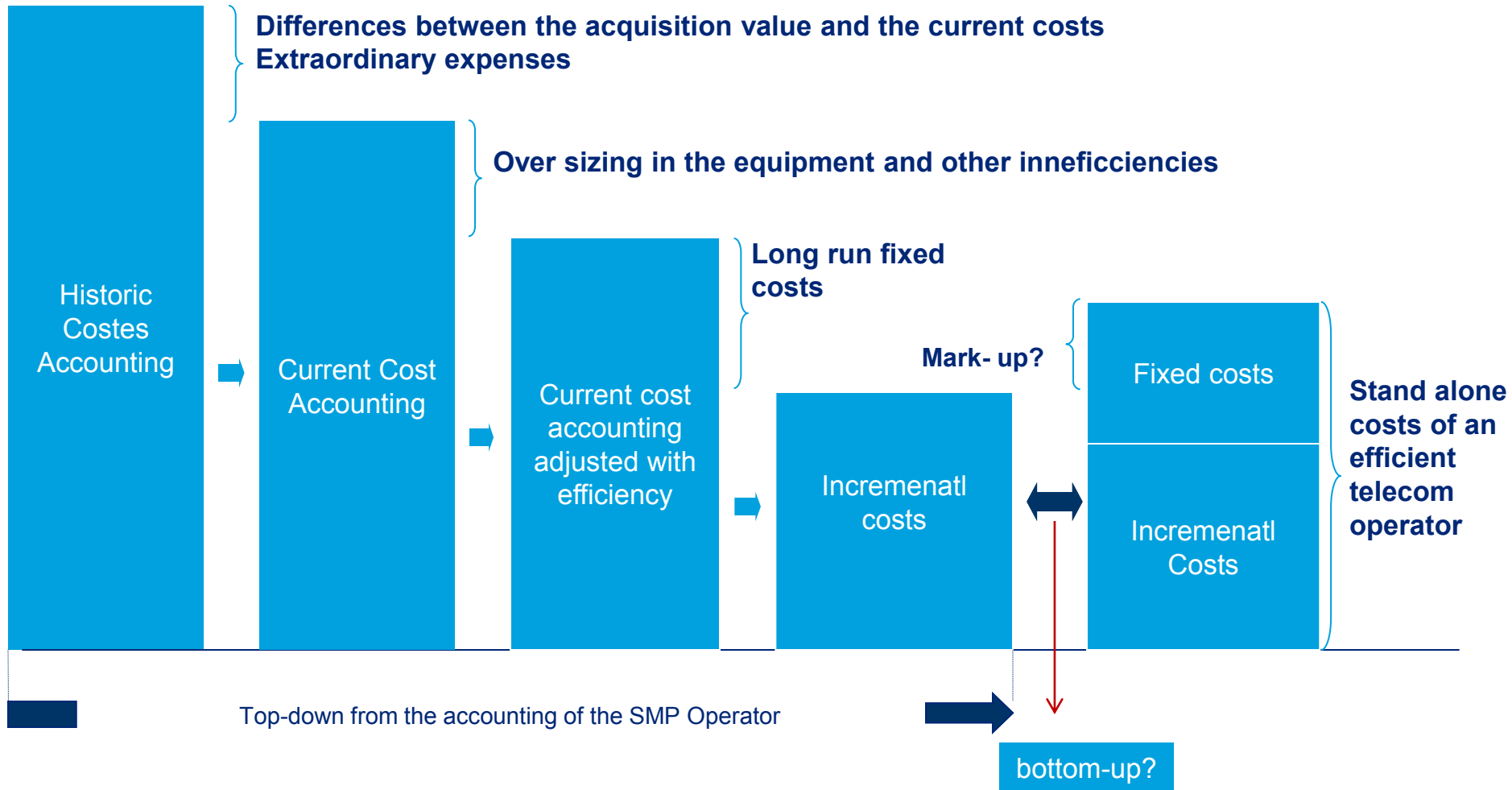


Phases of an accounting model

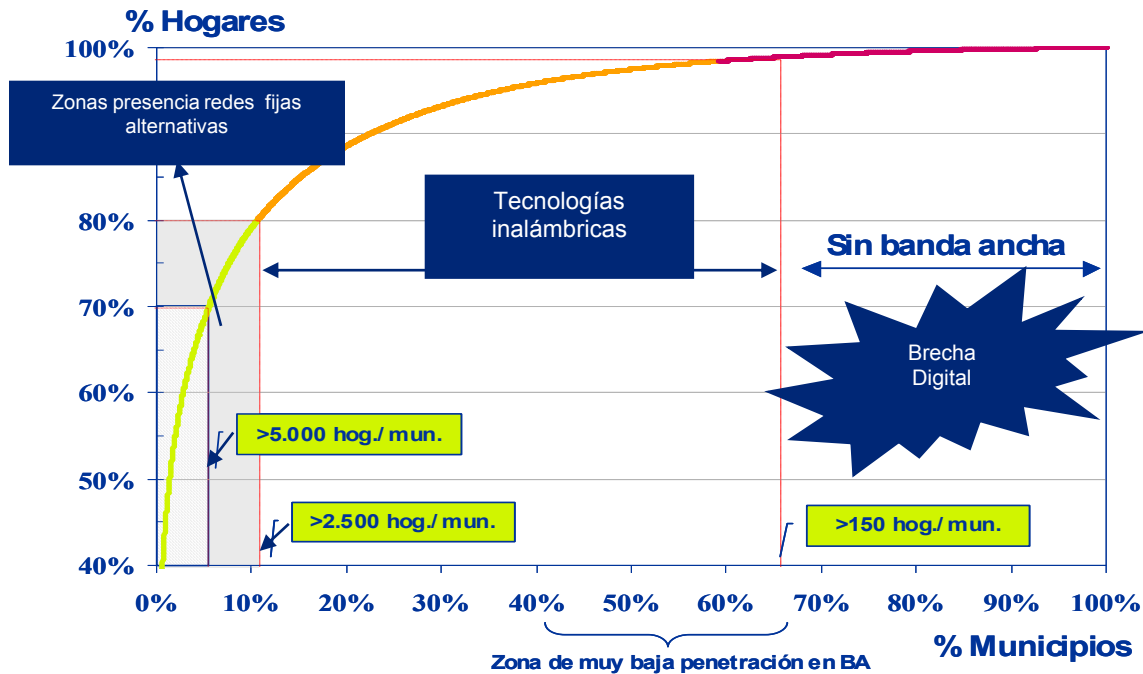


**5. When should be
used a bottom up?**

When should be used a bottom up?



When should be used a bottom up?



Cost-based prices

vs

Reasonable prices

6. Cost accounting as a tool for regulators

- Wholesale price setting (interconnection and access)
- Symmetric vs asymmetric prices (FTR/MTR –Waterbed effect)
- Universal Service Cost estimation (Access deficit)
- Estimation of the productivity factor X (*price cap/glide path*)
- Analysis of bundling offers
- Cost/benefit analysis of the regulatory policy
- Commercial strategy of the operators
- Improvement of the production process and increase in the competitiveness

7. Recommendations

1. **Accounting models** (top-down) are a **useful tool** not only **for telecom operators** but also **for regulators**, because that allows them to monitor the regulatory policies and how they impact on the results of regulated operators .
2. **Accounting models** (top down) are very **sensitive to** the weighted average cost of capital (**WACC**), the **depreciation method** and **lifespam**, so that the regulator, in addition to defining the principles, criteria and conditions should have some control over these variables,.
3. We need a **verification** (audit) of the results presented periodically to ensure that they comply with legislation and guidelines issued from the regulator.
4. **Accounting models** (top down) usually are **supplemented with** theoretical models (**bottom up**) as these take into account the concept of productive efficiency thus has a direct impact on allocative efficiency ...
5. **No model is better than the other**, everything **depends on competitive conditions** (orientation of prices and costs vs reasonable prices) **and information available** to develop each of them.
6. The **cost models are useful** not only for setting access charges and interconnection but also for **estimating the deficit**, setting **X**, **replication of commercial offers**, etc.



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Areas of expertise:

- Telecommunications
- Regulation
- Strategy

Academic Background:

- PhD in Economics, Universidad Carlos III de Madrid
- PDD IESE business School
- Higher Education en Administración de Empresas en Heriot-Watt University (Edinburgh)
- Bachelor degree in Business Organization at Universidad de Salamanca

Antonio García Zaballos

Antonio García Zaballos is PhD in Economics at Universidad Carlos III de Madrid. Currently he is senior advisor to the Global ICT Department of the World Bank and expert to the International Telecommunications Union (ITU).

Dr. García Zaballos was Head of the Cabinet for Economic Studies and Regulation (GEER) at Telefónica España, and was also Deputy Director at CMT, the Spanish telecoms regulator, where among others he was responsible for market analysis and economic issues applied to the estimation of the cost of Universal Service Obligations (USO), Fixed-Mobile convergence, regulatory policy applied to bundling, regulatory policy applied to retail and wholesale services and auditing of cost accounting models. He has a broad experience in economic consulting applied to the telecom sector in countries as: Saudi Arabia, Dominican Republic, Guatemala, Costa Rica, Argentina, Latvia, Bulgaria, Poland and Albania.

Additionally, Dr. García Zaballos is a professor at Instituto de Empresa Business School and University Carlos III in Madrid, where he teaches telecoms economics and applied finance at the Global MBA and the Master in Industrial Economics.