



World Class Standards

# GSM MOU – The Commercial Strategy

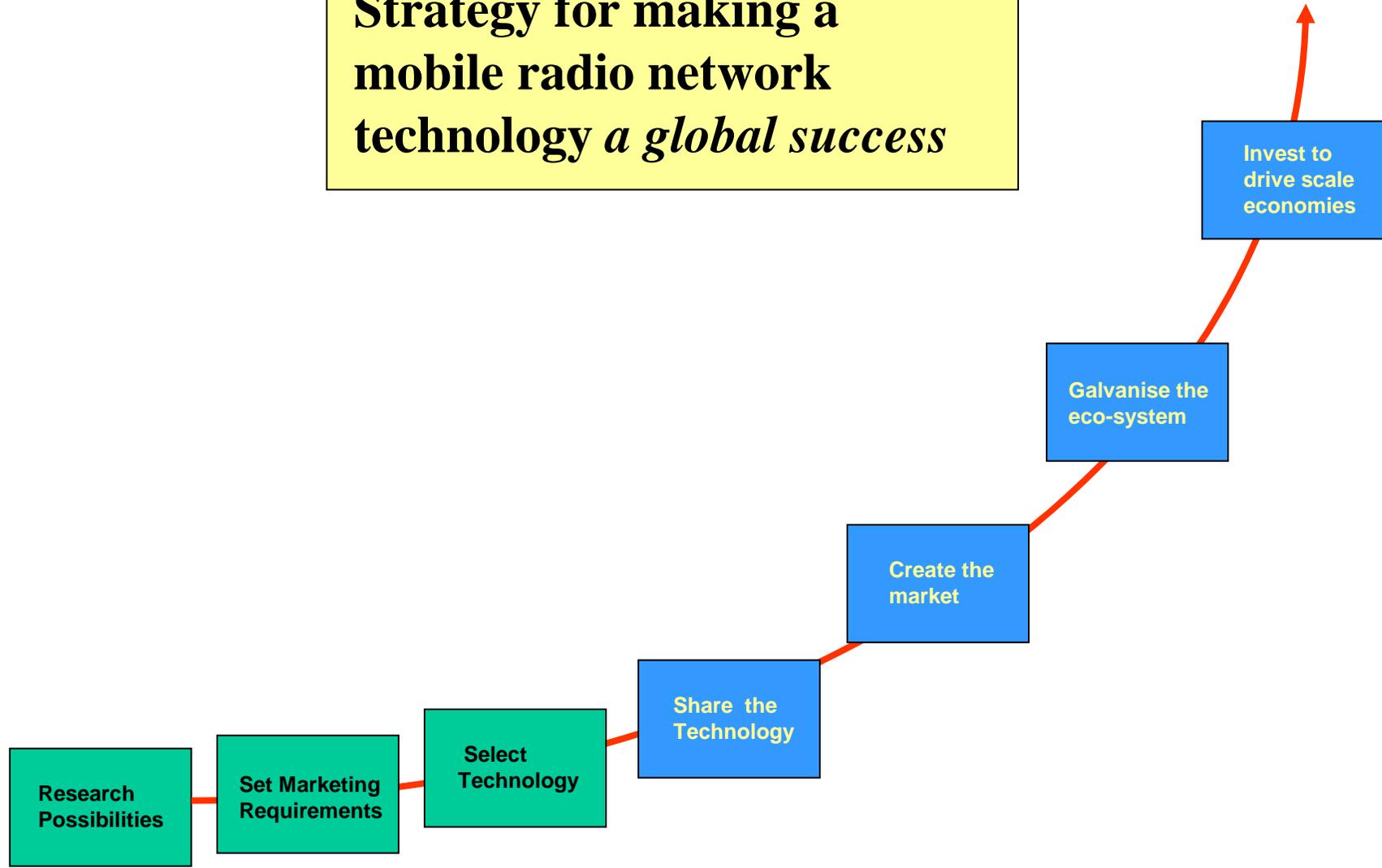
Stephen Temple CBE

GSM...younger than ever

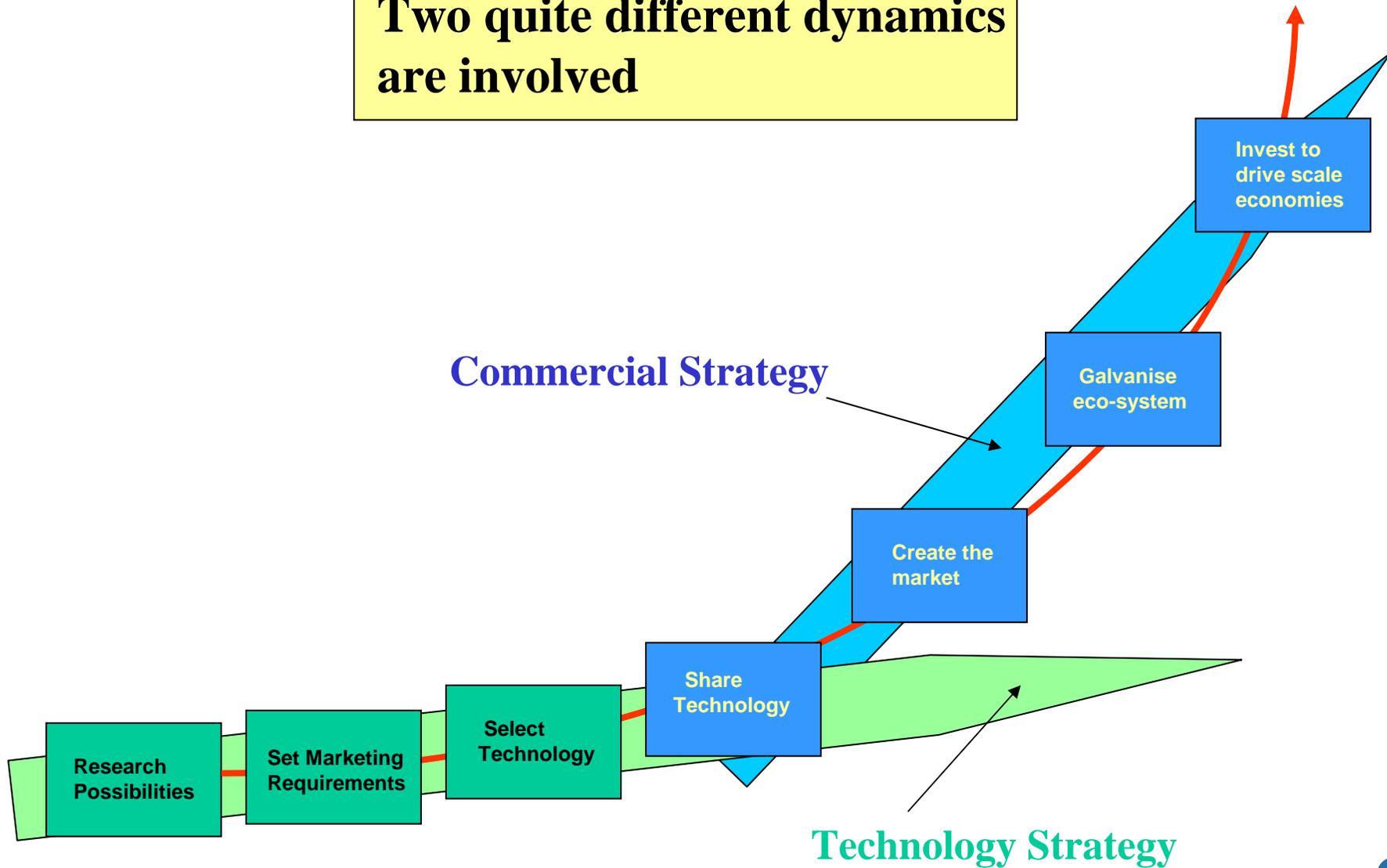
Lemesos, Cyprus  
15 – 16 March 2007



**Strategy for making a mobile radio network technology *a global success***



**Two quite different dynamics are involved**



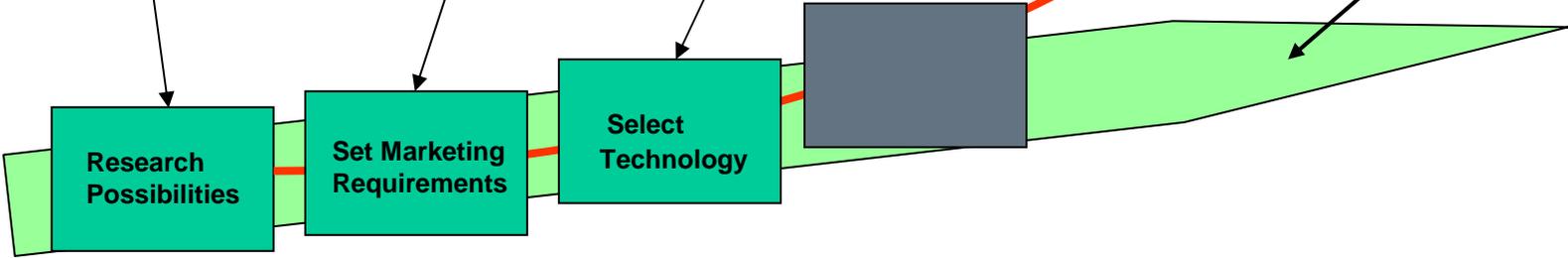
## The Technology Strategy:

Note: The Subject of other presentations

- Speech Coders
- Digital Multiple Access
- Encryption

- Voice Quality
- Infra-structure Cost
- Terminal Cost
- Spectrum Efficiency
- Hand portables viability
- Data Viability

Broadband versus narrow band TDMA

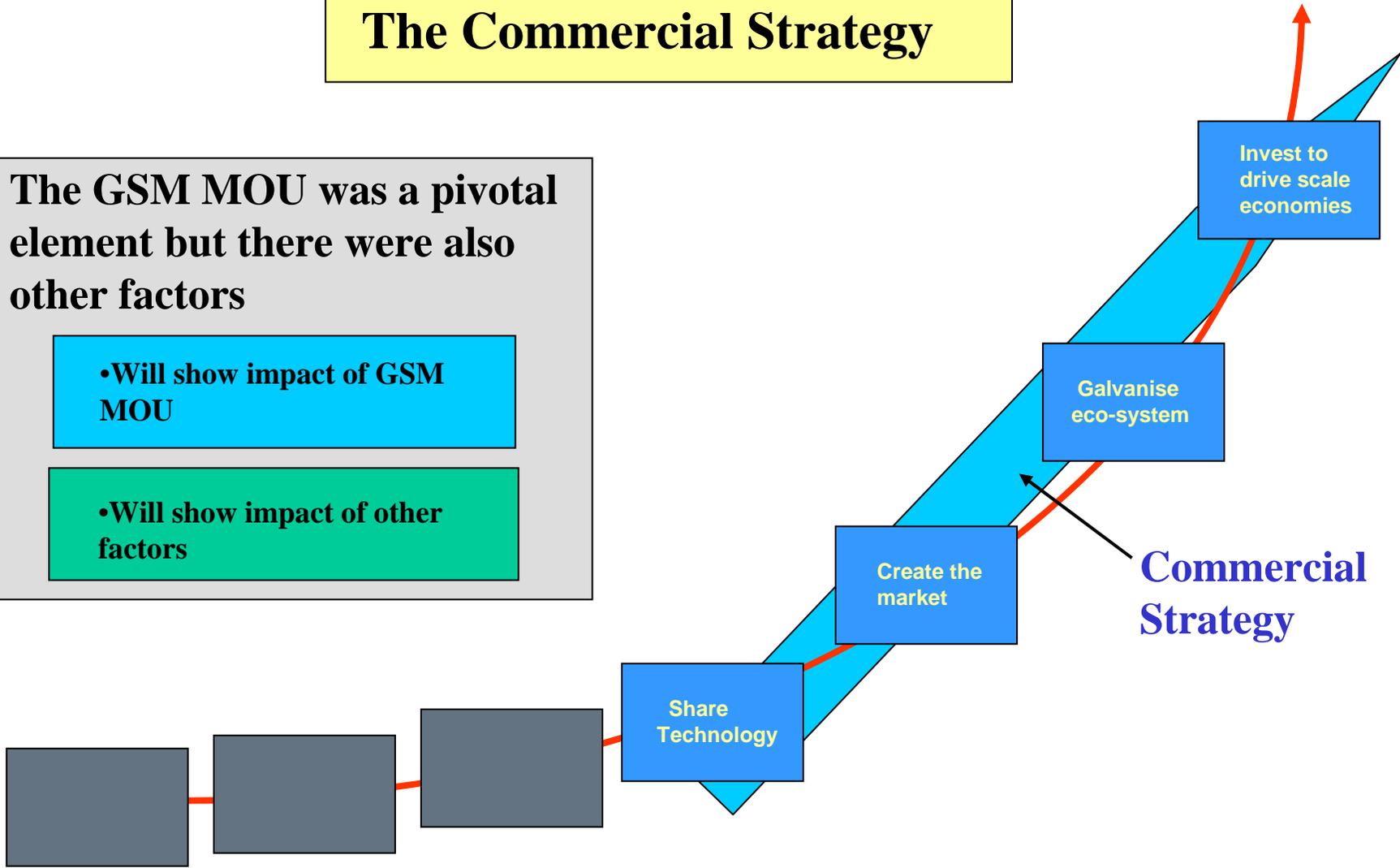




## The Commercial Strategy

The GSM MOU was a pivotal element but there were also other factors

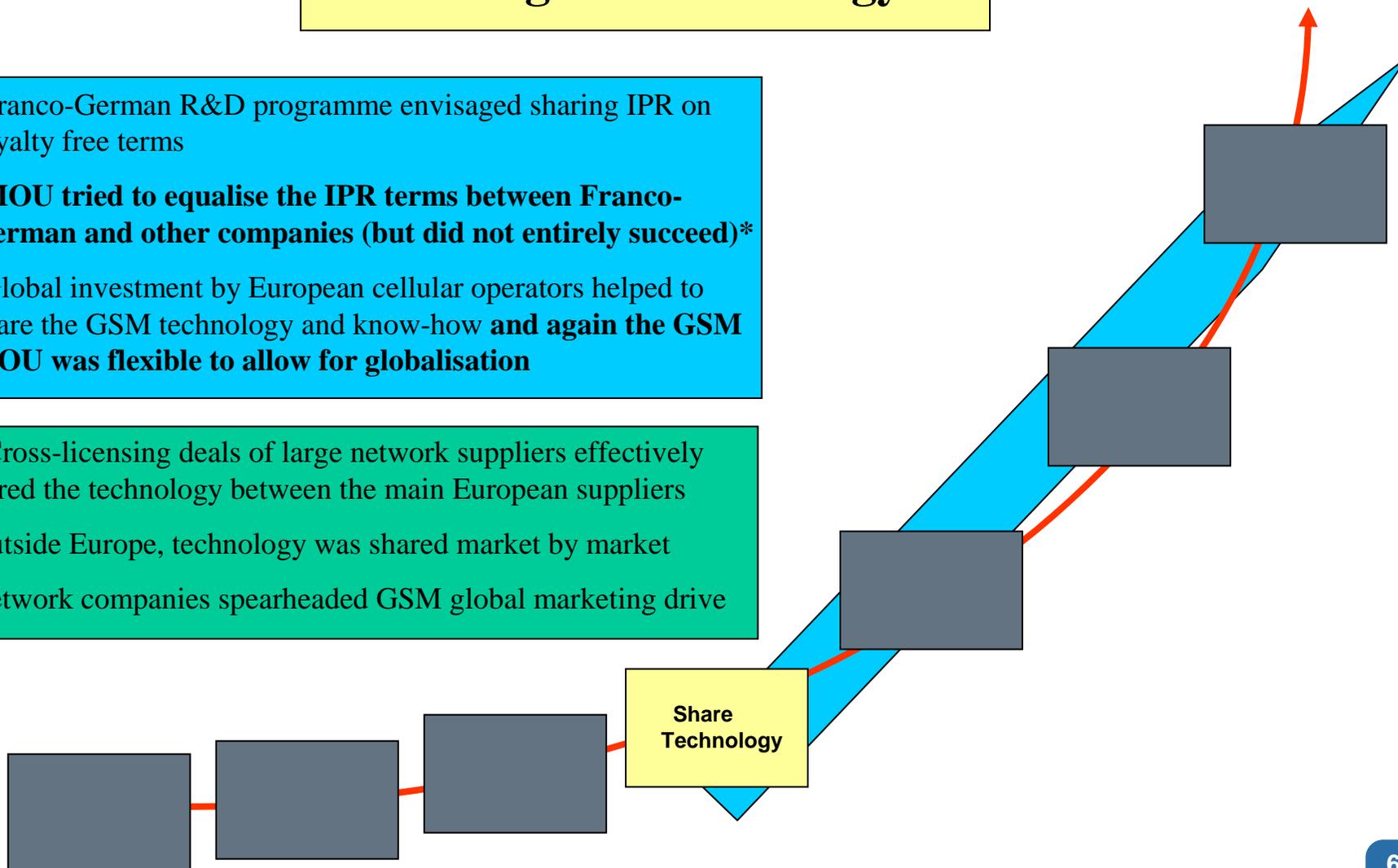
- Will show impact of GSM MOU
- Will show impact of other factors



## Sharing the Technology

- Franco-German R&D programme envisaged sharing IPR on royalty free terms
- **MOU tried to equalise the IPR terms between Franco-German and other companies (but did not entirely succeed)\***
- Global investment by European cellular operators helped to share the GSM technology and know-how **and again the GSM MOU was flexible to allow for globalisation**

- \*Cross-licensing deals of large network suppliers effectively shared the technology between the main European suppliers
- Outside Europe, technology was shared market by market
- Network companies spearheaded GSM global marketing drive





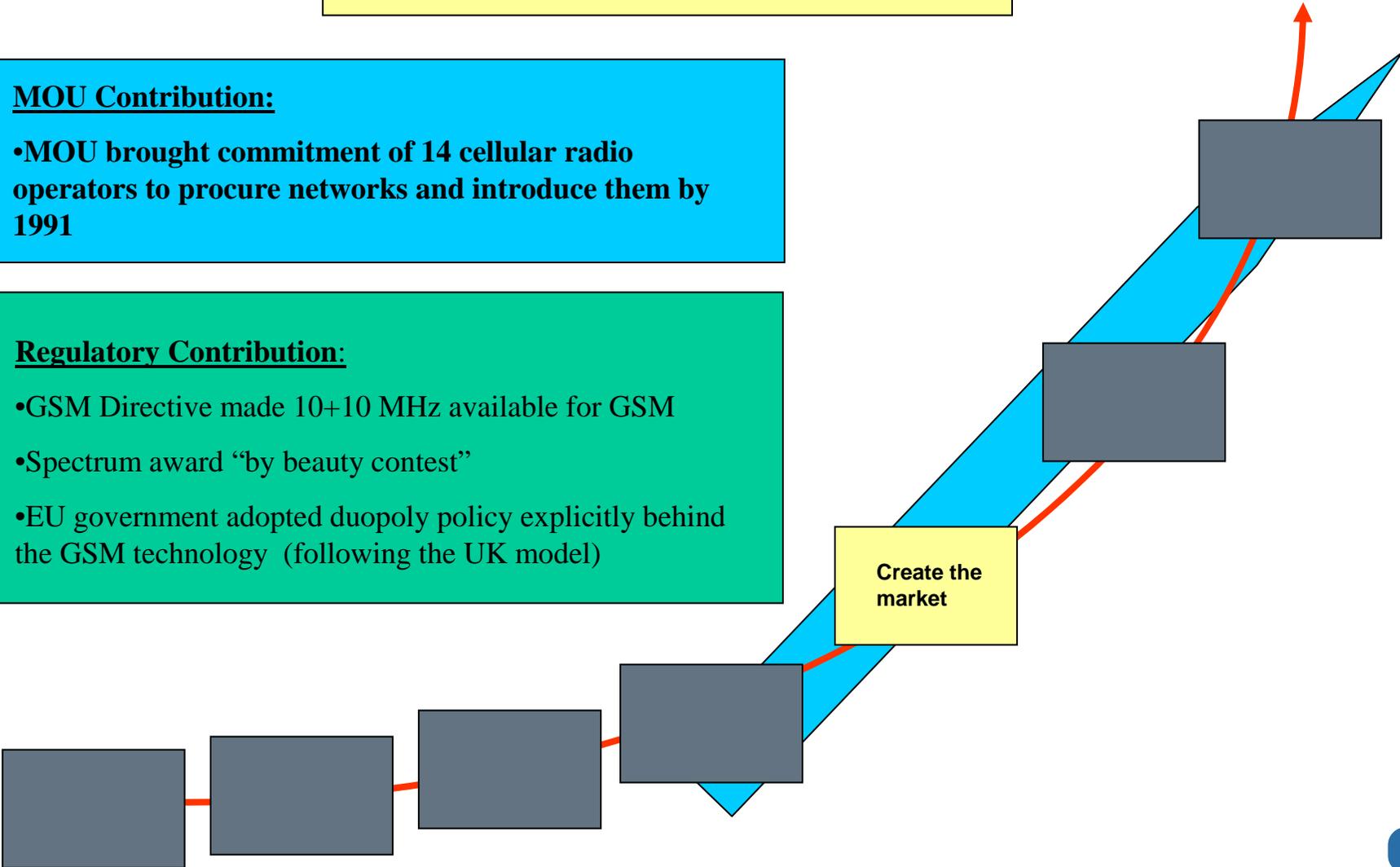
## Creating the market

**MOU Contribution:**

- MOU brought commitment of 14 cellular radio operators to procure networks and introduce them by 1991

**Regulatory Contribution:**

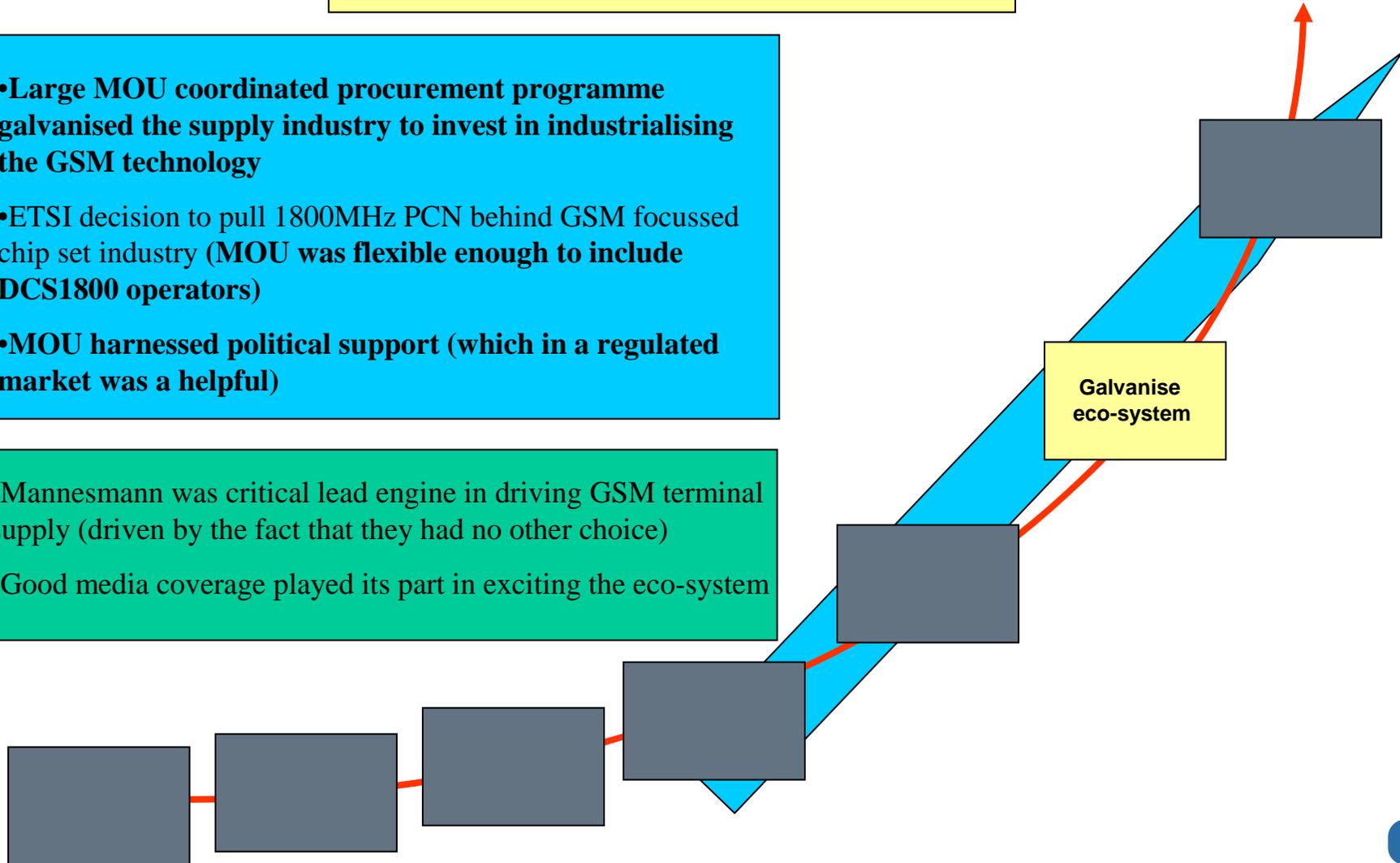
- GSM Directive made 10+10 MHz available for GSM
- Spectrum award “by beauty contest”
- EU government adopted duopoly policy explicitly behind the GSM technology (following the UK model)



## Galvanise the eco-system

- **Large MOU coordinated procurement programme galvanised the supply industry to invest in industrialising the GSM technology**
- **ETSI decision to pull 1800MHz PCN behind GSM focussed chip set industry (MOU was flexible enough to include DCS1800 operators)**
- **MOU harnessed political support (which in a regulated market was a help)**

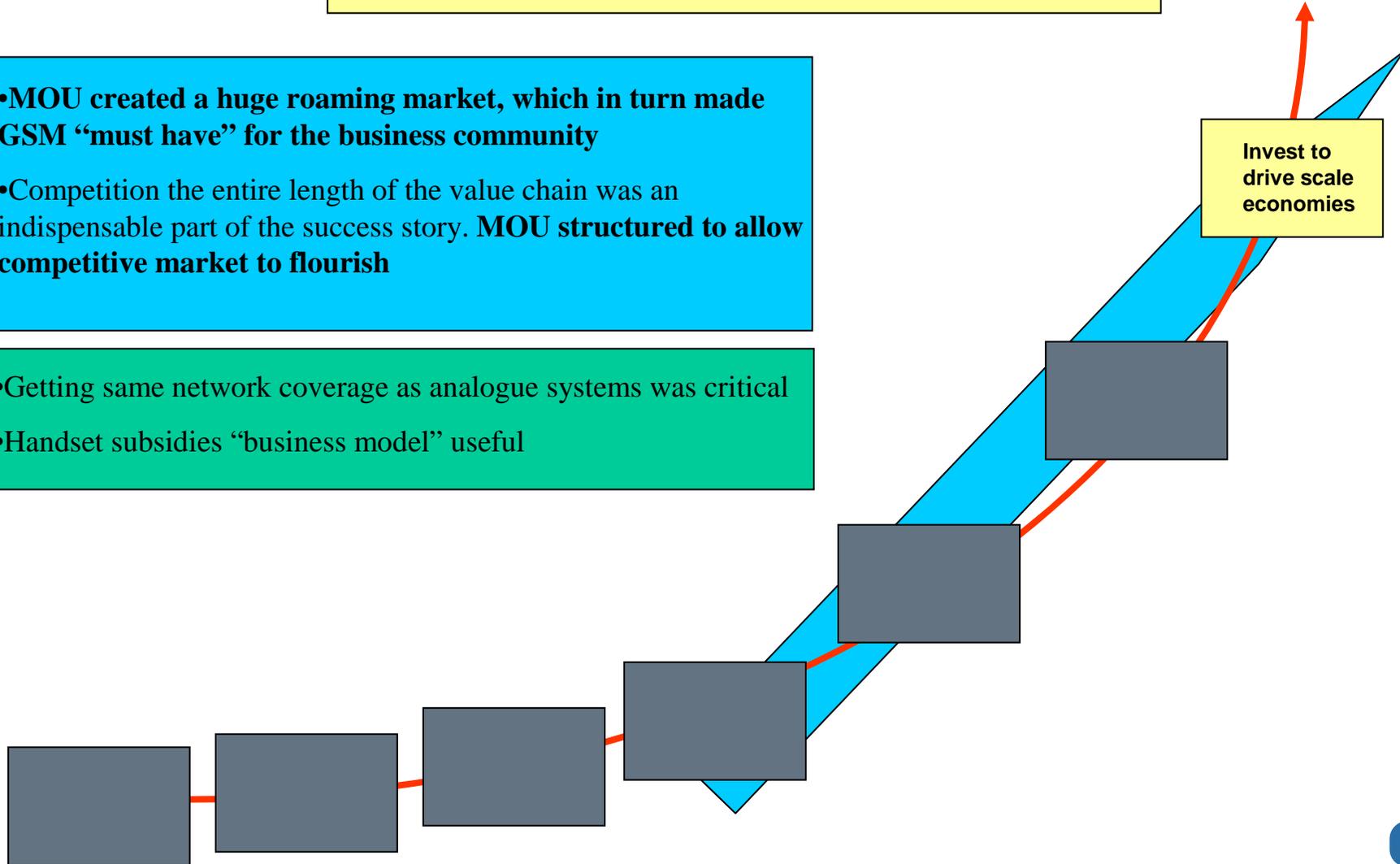
- **Mannesmann was critical lead engine in driving GSM terminal supply (driven by the fact that they had no other choice)**
- **Good media coverage played its part in exciting the eco-system**



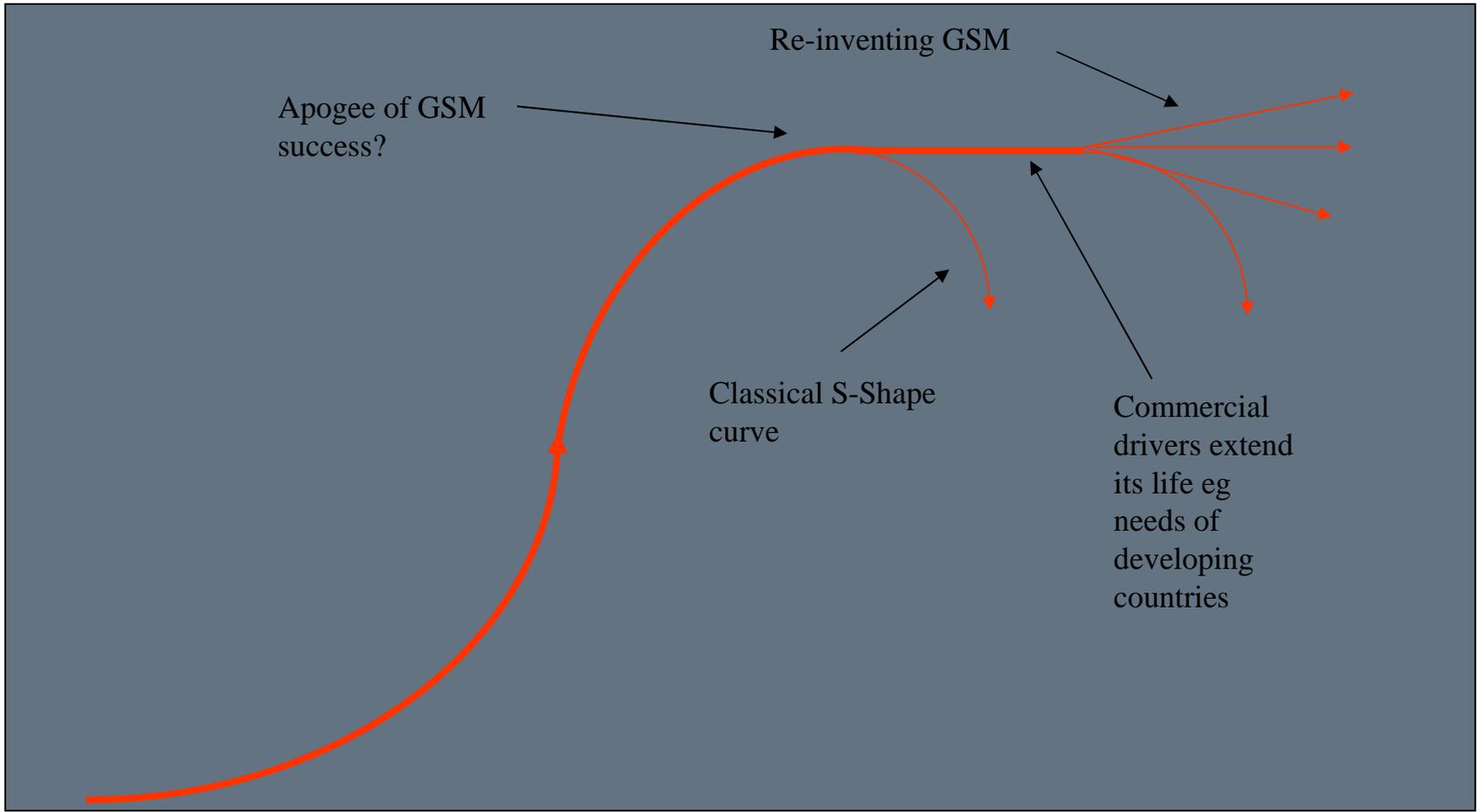
## Investing to drive scale economies

- MOU created a huge roaming market, which in turn made GSM “must have” for the business community
- Competition the entire length of the value chain was an indispensable part of the success story. MOU structured to allow competitive market to flourish

- Getting same network coverage as analogue systems was critical
- Handset subsidies “business model” useful



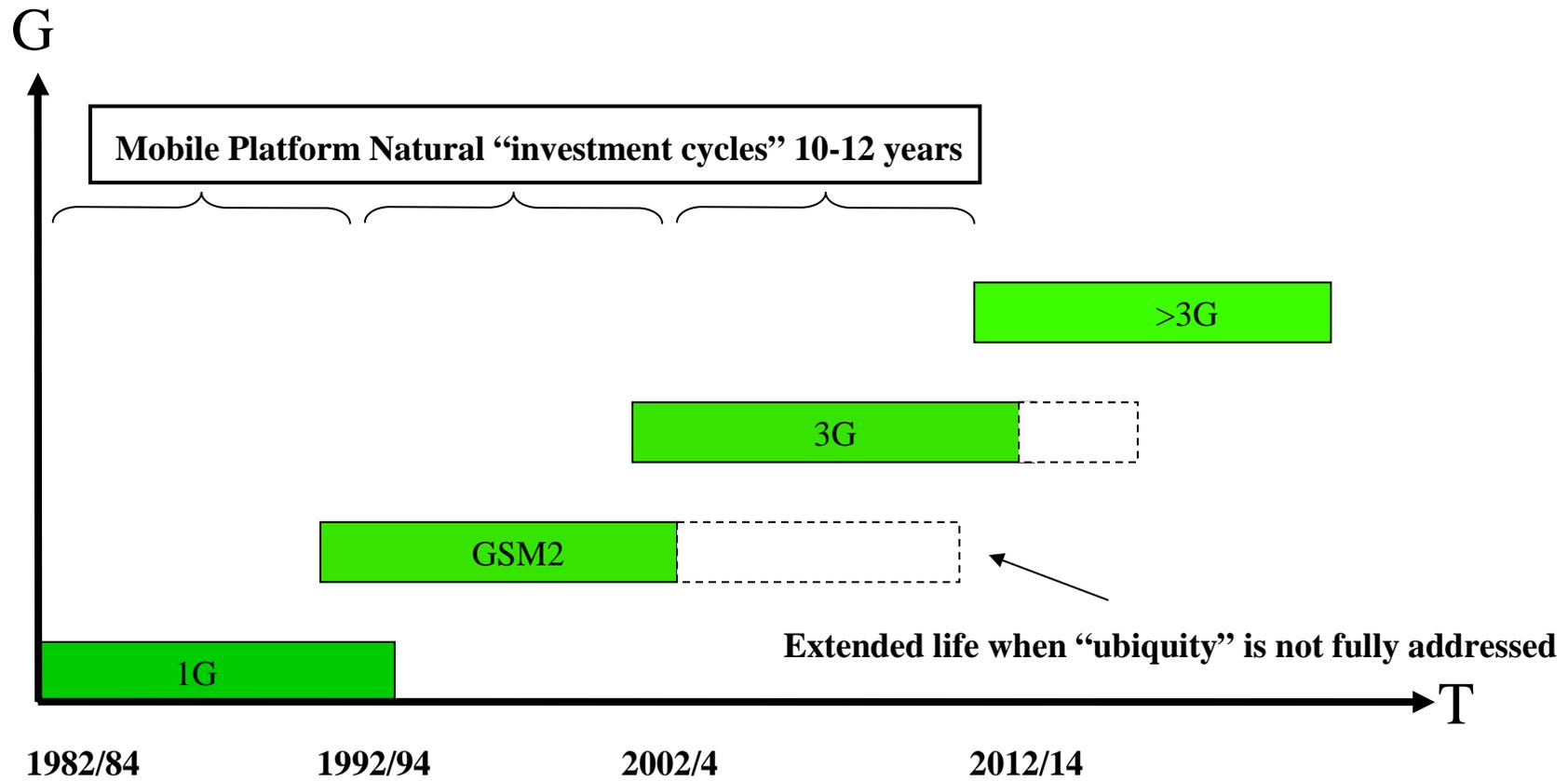
## GSM's future commercial strategy



### Re-inventing GSM:

- SMS re-invented by young customers (driven by attractive data tariffs relative to voice)
- GPRS creates a ubiquitous “light data” carrier work-horse
- GPRS has enabled MMS (Multi-Media Messaging) over GSM
- EDGE takes the edge off 3G data coverage black-holes as well as providing the most cost effective rural “medium data” solution
- The GSM SIM card has create a de- facto global currency for small transactions in some areas
- GSM coverage ubiquity drives innovation in other sectors eg security of high value loads, remote control & monitoring, road pricing, etc
- Silicon technology advances ensured incredibly low current drain GSM chip sets – allowing dual mode sets that eased 3G’s entry
- GSM plus pod casting pushes the boundaries of GSM for multi-media

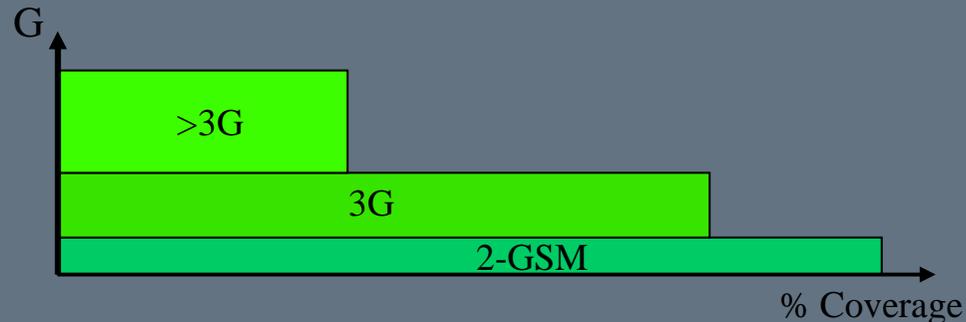
## “Next Generation” Theory:





## “Next Generation” Practice:

### 1. Coverage shortfall



### 2. Terminal parity

Cheapest GSM sets likely to be one third of the price of the cheapest 3G sets *in 5 years from now*

### 3. Roaming

3G not globally as universal as GSM

### 4. Cost of forced migration

20m ultra light GSM users in Europe expensive to migrate

### 5. GSM does the voice job well

Reasons why a large terminal price imbalance will remain:

- 3G sets need a GSM chip-set but GSM sets do not need a 3G chipset

- 3G requires faster processing speed

- More features are being added to 3G handsets eg HSDPA, UMTS900 etc

- The 3G price is being inflated with excessive IPR royalty demands

- GSM volumes are still rising driven by China, India etc

- “What the market can pay” is dragging down GSM handset prices in emerging markets but not 3G

### **GSM over the next 10 years:**

- **Main engine to drive mobile penetration in emerging markets**
- **Low cost solution to address light users in mature markets**
- **Mainstay for rural coverage (ubiquitous coverage sells!!)**
- **Technology of choice for fashion “designer” mobiles**
- **Opportunity to ignite “machine to machine” market (\$6 data modem)**
- **GSM Voice technology for new combinations of technology eg (DVB-H+GSM instead of 3G)**
- **Means to introduce new generations of cellular radio technology in its introductory phase when its coverage is limited eg (4G + GSM) instead of (4G + 3G)**
- **Its market apogee is likely to be 5-10 years out and this will ensure GSM technology sees its 40<sup>th</sup> birthday**

**... GSM remains the world’s most popular and cost effective technology for light voice and medium data requirements and its coverage ubiquity ( coupled with 3G WCDMA for Japan) is universal !!!**



## World Class Standards

...we can look forward with complete confidence to GSM's 30<sup>th</sup> Birthday and it would be a fair bet to put a date in your diary for GSM's 40<sup>th</sup> Birthday