OREGIN Workshop
Galileo, the Road to Success

PROGRAMME MANAGEMENT

Sean O'Malley
Managing Director
Thales Avionics Ltd

THALES

Thales is ...

Thales is ...

Largest European GNSS receiver manufacturer

World leader in service provision in Satnav and telematics

GPS markets Euros 200M/year

Pioneer in GNSS technical development

Leader in integrity provision through SBAS and GBAS

Outstanding large system capability

Thales has ...

Security & secure data transmission core business

Annual revenues of Euro 8.2 billion, order book over Euro 15 billion

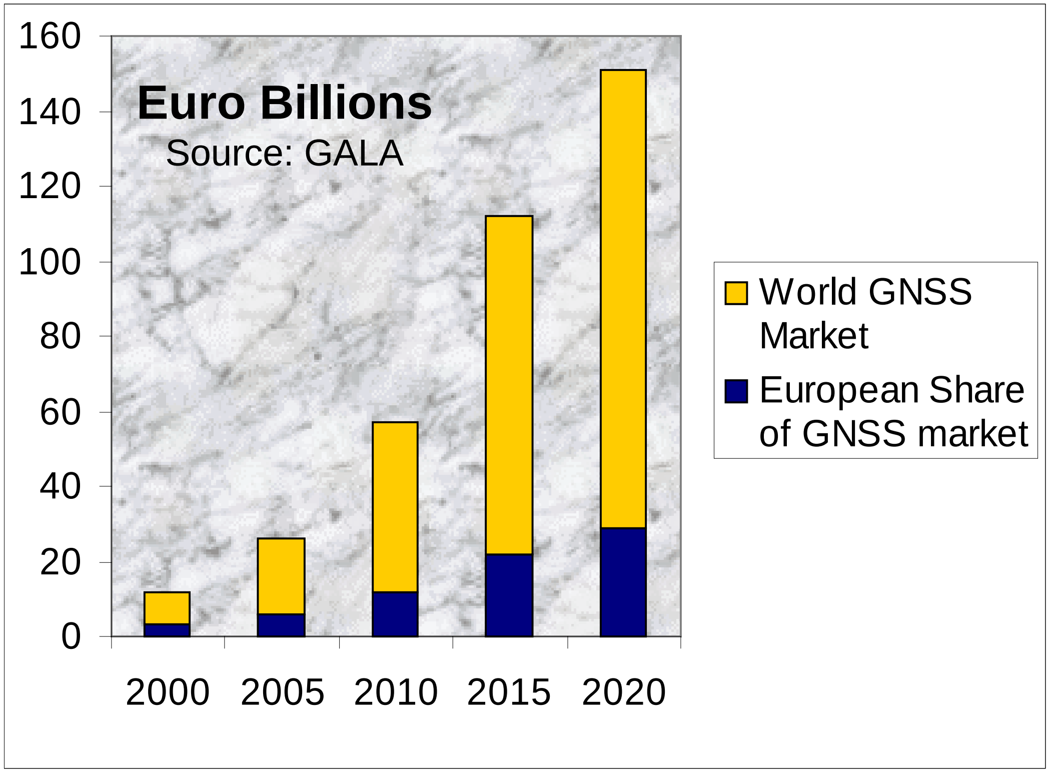
Extensive PPP experience around the globe

Multi-domesticity for large European infrastructure programmes, workforce of 65,000 persons

Thales GNSS Heritage

- GNSS services world leader - largest and highest performance DGPS network
- Largest civil/military GNSS manufacturer in Europe

Recap - Why are we here?



- Excellent potential for European Industry
  - US companies are already making approaches
- Strongest potential is in Services
  - Highest Margin activities
- Like your companies, Thales will aim for a significant share
- Zero option is that without Galileo European portion is less!
  - USA industry gains

THALES

Galileo Pitfalls

Member States understand compelling political, strategic, competitive logic for Galileo

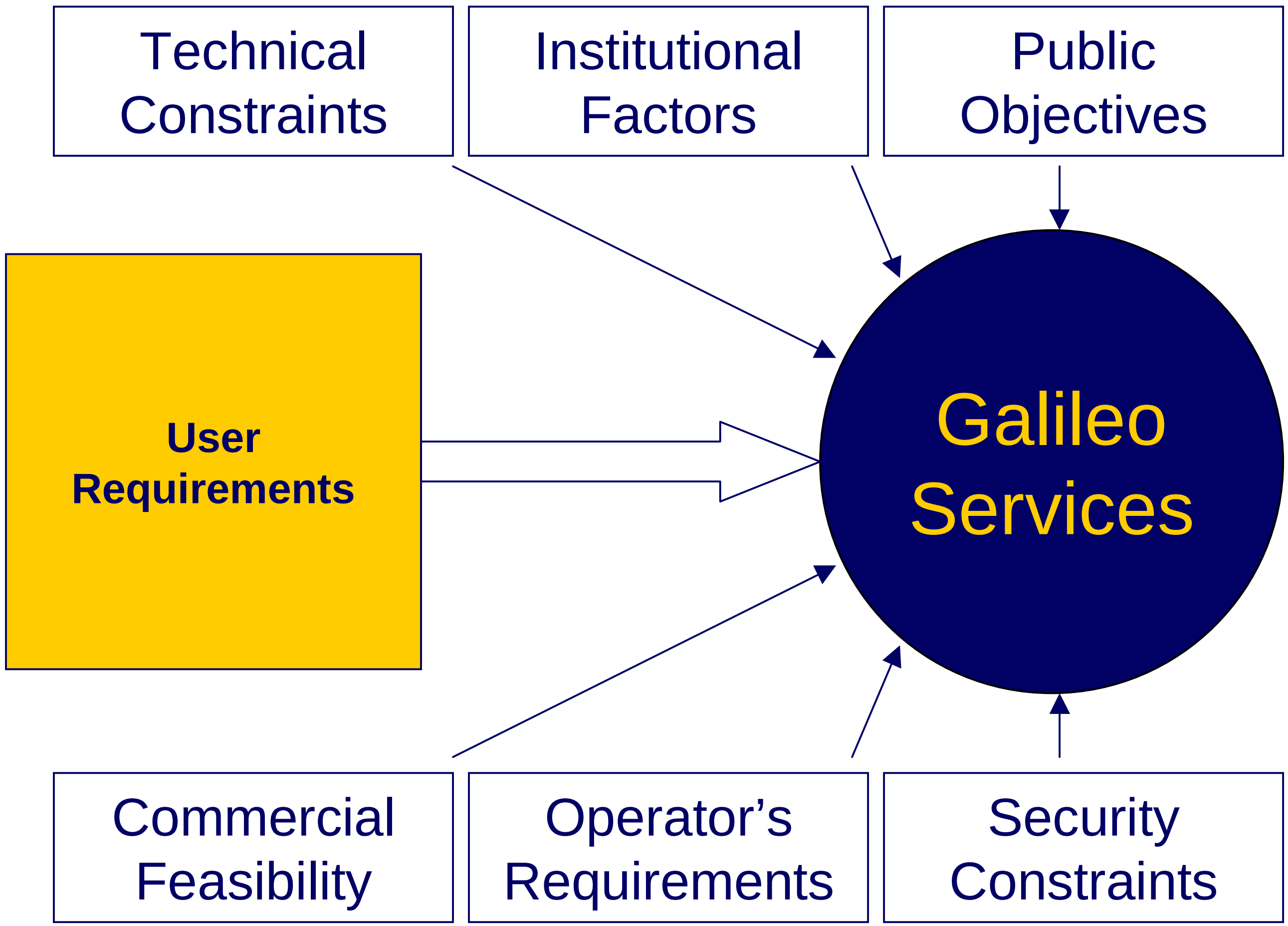
HOWEVER, until 2000

- No agreement on services
  - Lack of leadership
  - Ill-defined Mission Requirements
- Unstable institutional environment
  - Shifting political currents
- Limited technical understanding
- Little progress on PPP issues
- Insufficient project management, mishandled implementation
  - piecemeal, lacks transparency

This could easily lead to

- No investors
- Market will not be developed

The Alternative - User-driven approach



A Service Provider's view

User segment involvement in the early phases of the project is of paramount importance

- System architecture (from signal to receivers) and programme management (controlling and optimising costs, risk management of system performance, delays and budget overruns)
- Market development

User segment needs specific support to secure European competitive advantage

- Overall GPS public spending on User Segment estimated at 1.5-2 Bn US $

PPP/PFI will ensure user-driven programme

- Infrastructure operator's revenue is NOT the driver!

Indirect Industry investment in services & applications dwarfs the public/private infrastructure investments

Service Developer Concept

Service Developer

Market Development

Assume role of system promoter

Represent/consult end-user

Co-ordinate pilot projects

Establish **OPEN**, non-proprietary standards

Stimulate receiver and application technology

PPP Partner

Develop business case

Form the GOC with other industrial companies

Establish PPP with EU

Find industrial and financial partners

Participate in project implementation to ensure that the system meets the requirements

Industrial Architect

Author service and signal aspects of MRD
- –Encryption regime
- –Ranging signal
- –Nav message structure and content

Define signal & services

Define system interoperability compatibility, certification

Define Develop tools to validate system performance

Tasks of Service Developer 1

System specification

Author service and signal aspects of MRD

- Encryption regime
- Ranging signal
- Nav message structure and content

Define signal & services

Define system interoperability and compatibility

Define certification issues

Develop tools to validate system performance

Programme Management

Approve preliminary design

Strong monitoring of implementation

Tasks of Service Developer 2

Market and commercial development

Assume role of system promoter. Represent/consult end-user. Co-ordinate pilot projects

Establish **OPEN**, non-proprietary standards

Stimulate receiver and application technology

Develop business case

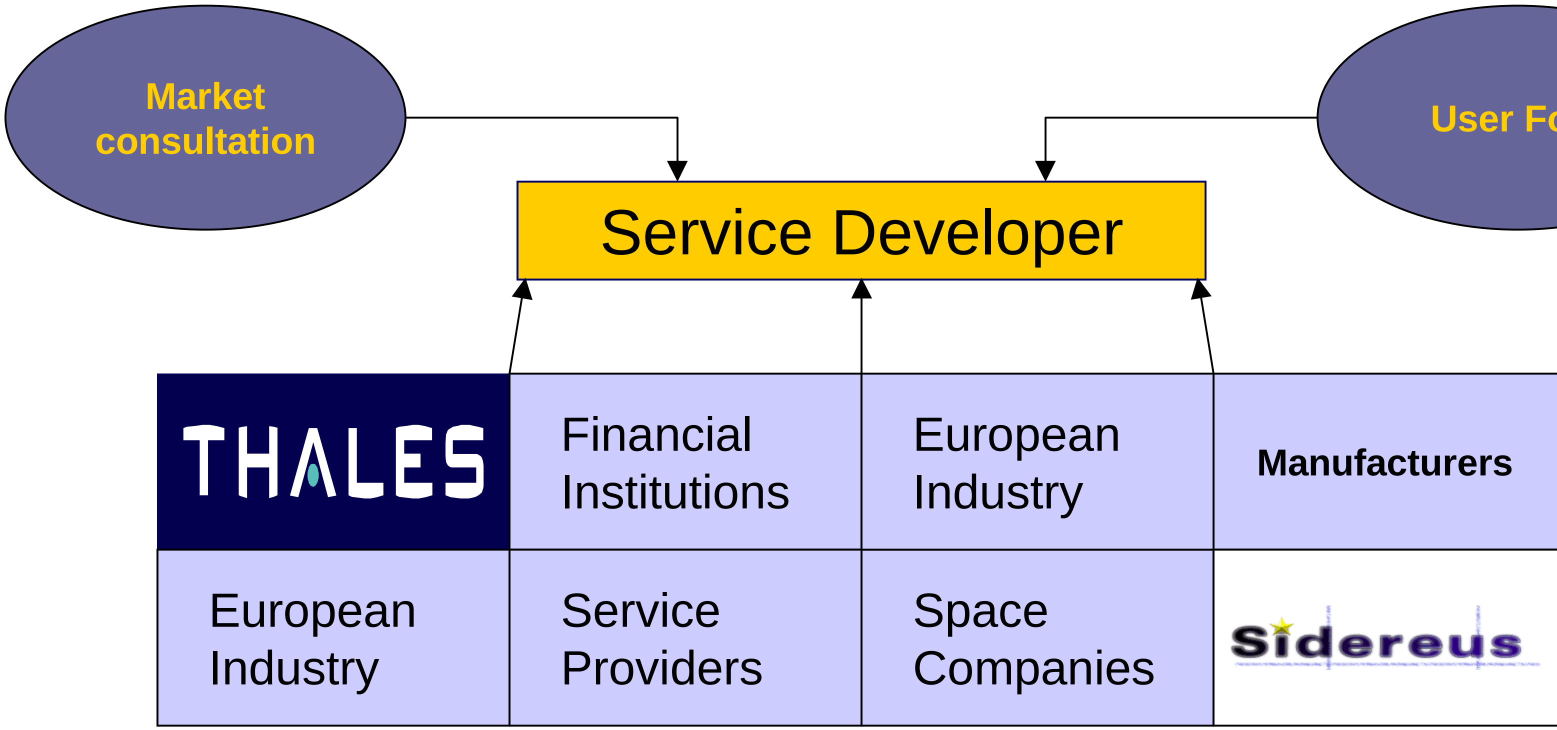
Form the GOC with other industrial companies

Establish PPP with EU. Find industrial and financial partners

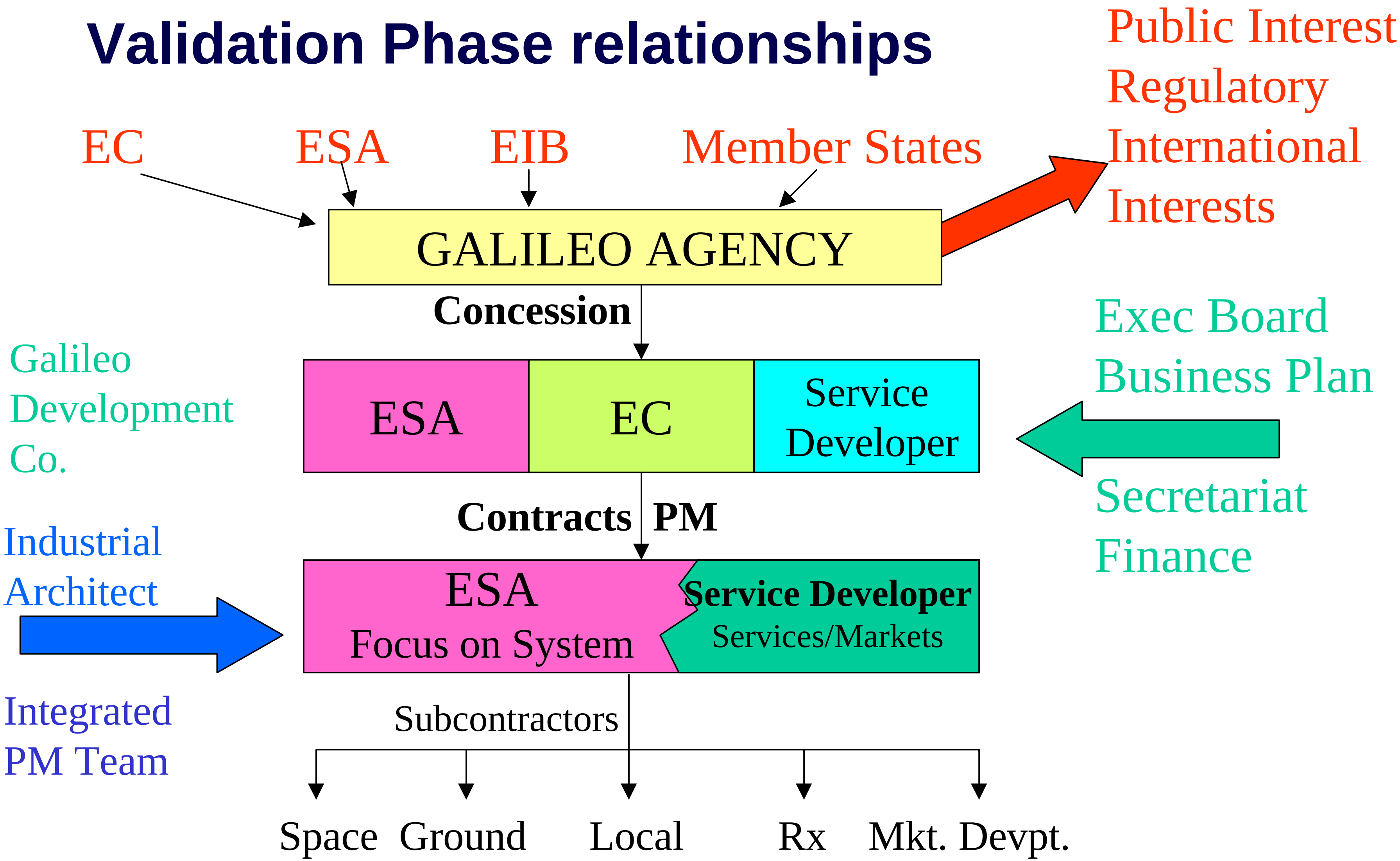
Operations

Evolve into system operating company

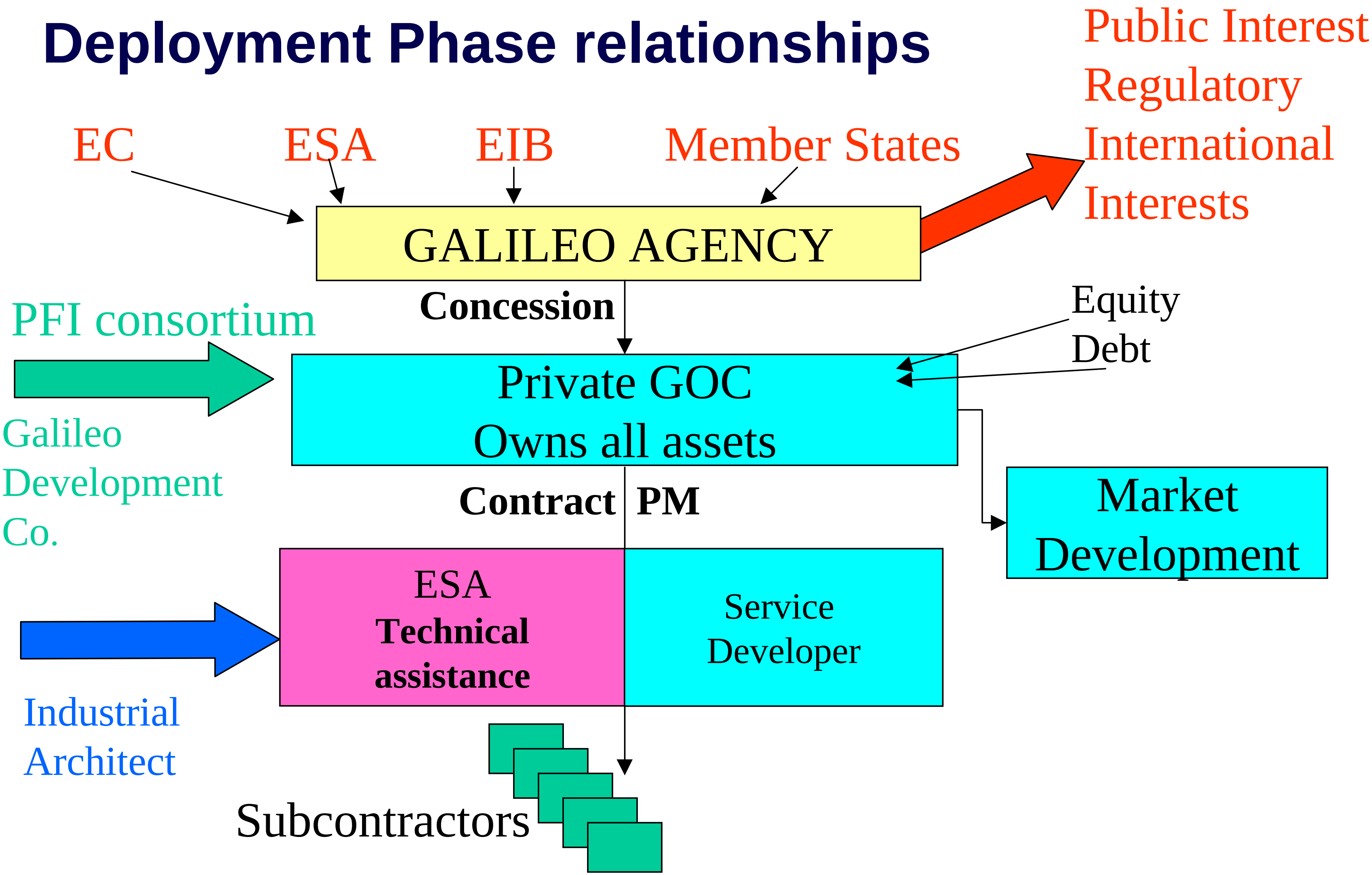
Who is Service Developer



Validation Phase relationships

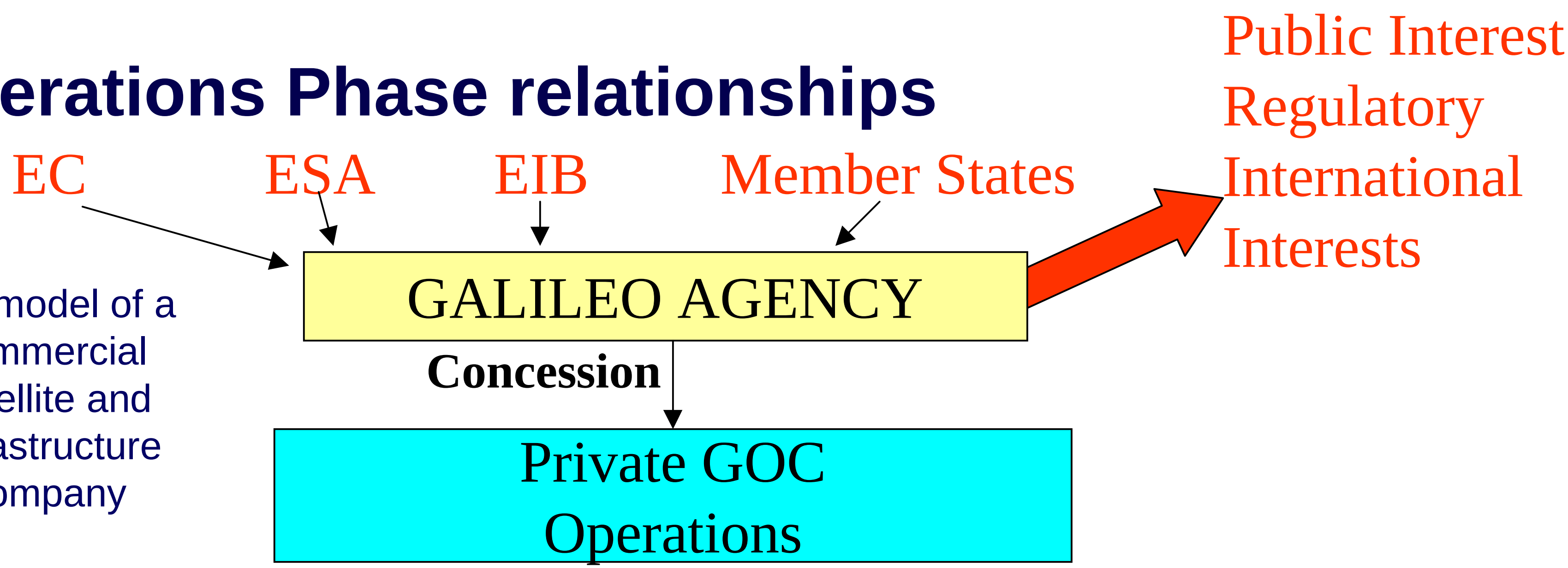


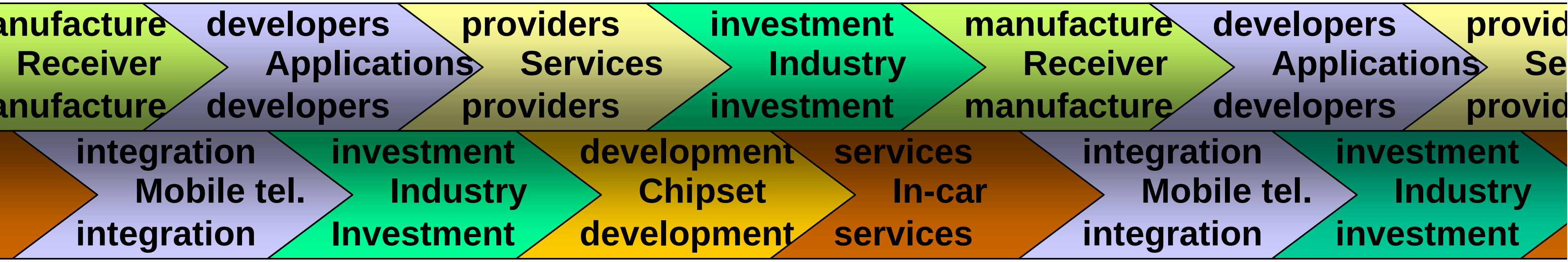
Deployment Phase relationships



Operations Phase relationships

Is a model of a commercial satellite and infrastructure company





The Service Developer Advantage

- Involving eventual operator allows for private sector investment
- End-customer must be involved to ensure demand
- Industry will work on financial and market development
- With industry involvement Galileo is shielded from non-commercial forces
- Commercial involvement strengthens long-term project management structure
- For commercial success, the future customers/users and the eventual Operator of Galileo must drive the service design process of Galileo, and must participate in implementation

Industry must be pro-active to ensure system success

Thales seeks to work with like-minded companies to start the Service Developer process:

- **Co-operate with other companies to define the Galileo Mission Requirements**
  - **Critique the evolving documentation, and take some ownership of the process**
- **Form a consortium of companies that will become the Service Developer**
  - **Evolutionary path to Galileo Operating Company**

GALILEO

A significant opportunity that Industry must embrace