

Keynote

Roger McKinlay – NAVAC

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Iridium began as a pet project of Motorola executive Barry Bertinger and some engineers in the mid 1980s after the former's wife famously complained of not being able to phone the US while on holiday in the Caribbean.

What went wrong – the journalist view



unrealistic planning - insufficient management control - bungled marketing - technological pig-headedness – blinkered focus on technological challenge – disregard of handset cost – disregard of cost per minute – disregard of size and weight – didn't work indoors – too difficult to use without training – no interface with terrestrial network.....

But don't worry – Globalstar is coming!

Lessons



- Technical challenge rarely the only challenge.
- Costs and Kg matter.
- Who is the missing partner?
- Who was the perceived competitor?
- What would the public sector have done?
- What was outside the box?

Lesson's learned?



BLUE ORIGIN



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PNT is Different

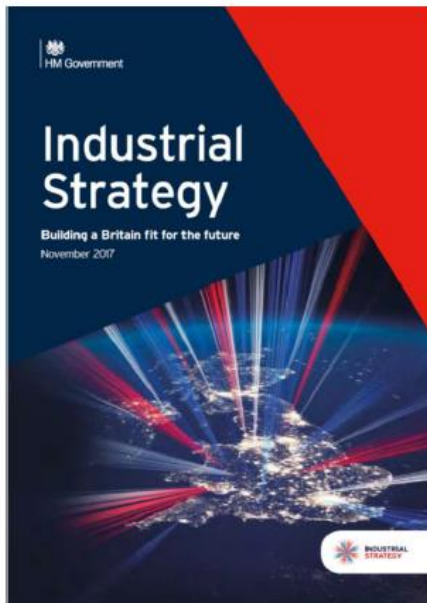


- The user cannot see the system – the system cannot see the user.
- Everything is a hybrid. No single system meets all needs.
- More than one solution to any need.
- Some needs demand more than one solution
- Collaboration is key
- The state essential to PNT: PNT essential to the state.
- No Upstream and Downstream. Simply service and infrastructure.
- There is a need for universal PNT.

The Trends

- Growing reliance on GNSS
- Need for GNSS-free solutions
- Geospatial Intelligence
- Intelligent Mobility
- IoT
- Autonomous Vehicles
- Ubiquitous Connectivity
- Timing and Synchronisation
- Security

Creating an economy that boosts productivity and earning power throughout the UK



Our five foundations

-  **Ideas**
the world's most innovative economy
-  **People**
good jobs and greater earning power for all
-  **Infrastructure**
a major upgrade to the UK's infrastructure
-  **Business Environment**
the best place to start and grow a business
-  **Places**
prosperous communities across the UK



AI & Data Economy

We will put the UK at the forefront of the artificial intelligence and data revolution



Future of Mobility

We will become a world leader in the way people, goods and services move



Clean Growth

We will maximise the advantages for UK industry from the global shift to clean growth



Ageing Society

We will harness the power of innovation to help meet the needs of an ageing society

UK Research and Innovation

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ESA is appreciated for



- Leadership
- Big thinking: Architecture, Systems Engineering, Market needs, analysis and time frames, product and service definition
- Business Models, Cost Modelling and Service pricing
- Access to end users and clients
- Building product/service quality
- Encouraging new entrants
- Finding new partners

What Might NAVISP Be Remembered For?



- Innovative Satellite/PNT Ideas
- Better industrial capability
- More jobs
- Growth
- Improved technology readiness
- New entrants
- Management of technical, business, market and regulatory risks
- Stronger National Programmes and Institutions



Eight things to do in the next two days.



- Have a good idea
- Have another good idea
- Find a partner
- Form a consortium
- Identify a market
- Meet a prospective customer
- Lobby a regulator
- Find someone with an even better idea
- Find someone with some money

