



Avanti Communications Group plc
SPACE SOLUTIONS IN TIMES OF ECONOMIC CRISIS

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AGENDA

- Introduction
- Avanti
- New Industries for Growth
- Space in Partnership with Government to meet societal challenges
- The Global Explosion in Data Usage
- The emergence of new Space Communications Technology
- New PPP financing methods
- The Final Frontier – The Space Internet



INTRODUCTION

❑ ECONOMIC CRISIS MEANS

- We must save money
- Seek out productivity growth
- Foster new high growth industries
- Increase labour skills
- Increase market flexibility
- Avoid the temptation to choke growth with the dead hand of regulation

❑ SPACE SOLUTIONS MEANS

- Addressing government challengers with technology: digital divide, climate change, aging society, intelligent transport
- Creating new growth: satellite broadband will be a £29bn pa market by 2030
- Re-skill workforce – flexible working/home working can repatriate outsourced jobs



INTRODUCTION TO AVANTI

- Avanti sells superfast satellite broadband to service providers in Europe
- HYLAS, the first broadband satellite for Europe will launch in Q2 2010
- Technology developed in PPP with British government, ESA and EADS
- Customers anywhere can have up to 10Mb forward and 5Mb return.
- A 2Mb service is £99 install and £29 per month
- We sell wholesale - 52 distributors in 12 countries

NEW SATELLITE TECHNOLOGY ENDS THE DIGITAL DIVIDE



NEW INDUSTRIES FOR GROWTH

- ❑ We need to diversify from high risk finance and property sectors
- ❑ Europe cannot compete in commoditised industries with low labour cost regimes in China and India and soon, Africa.
- ❑ So we must focus on the NEED FOR SPEED
 - We have better R&D than China/India, but we must get it to market faster
 - Government must intervene in the capital markets to create financing structures to de-risk R&D phases
 - This must be married at the same time with capital markets investment for operations
- ❑ HYLAS is the perfect case study of simultaneous funding for R&D and Operational roll-out. It can work in Nav, EO and Security



NEW INDUSTRIES FOR GROWTH II

- ❑ Europe must up its game
 - State aid rules preventing rapid commercialisation of innovation MUST end.
 - Cost over runs and delays on technology projects MUST end
 - Government procurement MUST get smarter
 - Corporate governance must be clean, simple and flexible
 - Collaboration across borders and between companies must get simpler
 - Labour and capital markets MUST remain flexible – STOP BASHING BANKS and blame the regulators instead
- ❑ Society is about partnership. Emerging markets governments work in close partnership with industry to promote growth. We must have similar team work in our growth industries if we are to survive as industrialised countries.



PPP - NEED FOR SPEED CASE STUDY: HYLAS

- Early stage concept development studies 2002 -2004 funded through national programmes 50:50 with Avanti capital markets money
- Accurately forecast the Digital Divide
- Identified new technology opportunity in Ka band flexible payloads
- Non-heritage equipment was too risky for the capital markets
- So HMG though ESA stepped in to fund the R&D with £34m
- Avanti then raised £112m in equity and high yield debt

THIS PPP MODEL CAN BE USED TO ADDRESS OTHER GOVERNMENT CHALLENGES QUICKLY, CREATING JOBS AND WEALTH IN THE PROCESS



SPACE CAN MEET SOCIETAL CHALLENGES

- ❑ UK Government identifies certain key challengers where space can help:
- ❑ Ageing Society
 - Space technology can monitor health and location and allow old people to enjoy care at home for longer
- ❑ Scarce resources and changing climate
 - Only in space can we properly monitor our planet
- ❑ Globalisation;
 - The threat to our economies is also an opportunity, with our advantage in key technology areas we can dominate global infrastructure and services
- ❑ Innovation and technological diffusion changes lives and government role
 - Universal broadband changes government and reduces inequality
- ❑ Security – terrorism and poverty
 - Commercial space companies can make defence procurement more flexible, responsive and cheaper for border security and miltatcom operations



THE GLOBAL EXPLOSION IN DATA USAGE

❑ BROADBAND

- 60% terrestrial penetration in the developed World, but globally at least 10% need satellite
- Consumer throughput is doubling every year. Finally we see the dot-com J-Curve go vertical

❑ HDTV and 3D TV

- These trends intensify the pressure on traditional space capacity

❑ IMAGING/MONITORING

- New technologies open up new opportunities for security, policing, construction, climate change. But how do we move the data around ?

❑ NAVIGATION

- Intelligent transport for low carbon and high safety logistics and transport

**Finally the dot-com J-Curve is vertical & The role of space is expanding
Is this Europe's Biggest growth industry ?**



THE EMERGENCE OF NEW SPACE TECHNOLOGY

- ❑ Space technology takes longer to develop because it has to be design to:
 - Last 15 years
 - Operate in a vacuum with high temperature fluctuations
 - Survive the sonic and vibration stresses of launch
 - Be highly miniaturised
- ❑ Satellite incumbents were slow to move into broadband for example because of risk aversion and conflicting business models but start ups have filled the gap – WE NEED MORE.
- ❑ Given the explosion in global data usage (thank our lucky stars the dotcom bust bought us some time) new space technology is arriving at the right moment
- ❑ The next decade will be ours
- ❑ We have greater opportunity than at any time since the dawn of Pay TV



CONCLUSION

- Supply and demand factors are our friend
- The space internet is about to boom
- Space can solve government challenges and empower society
- We must enhance our flexibility
- Our commercial innovation is now more important than our technical innovation



THANK YOU

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