



North
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The Canadian Space Sector in the International Landscape

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The Canadian Space Commerce Association's AGM, Toronto

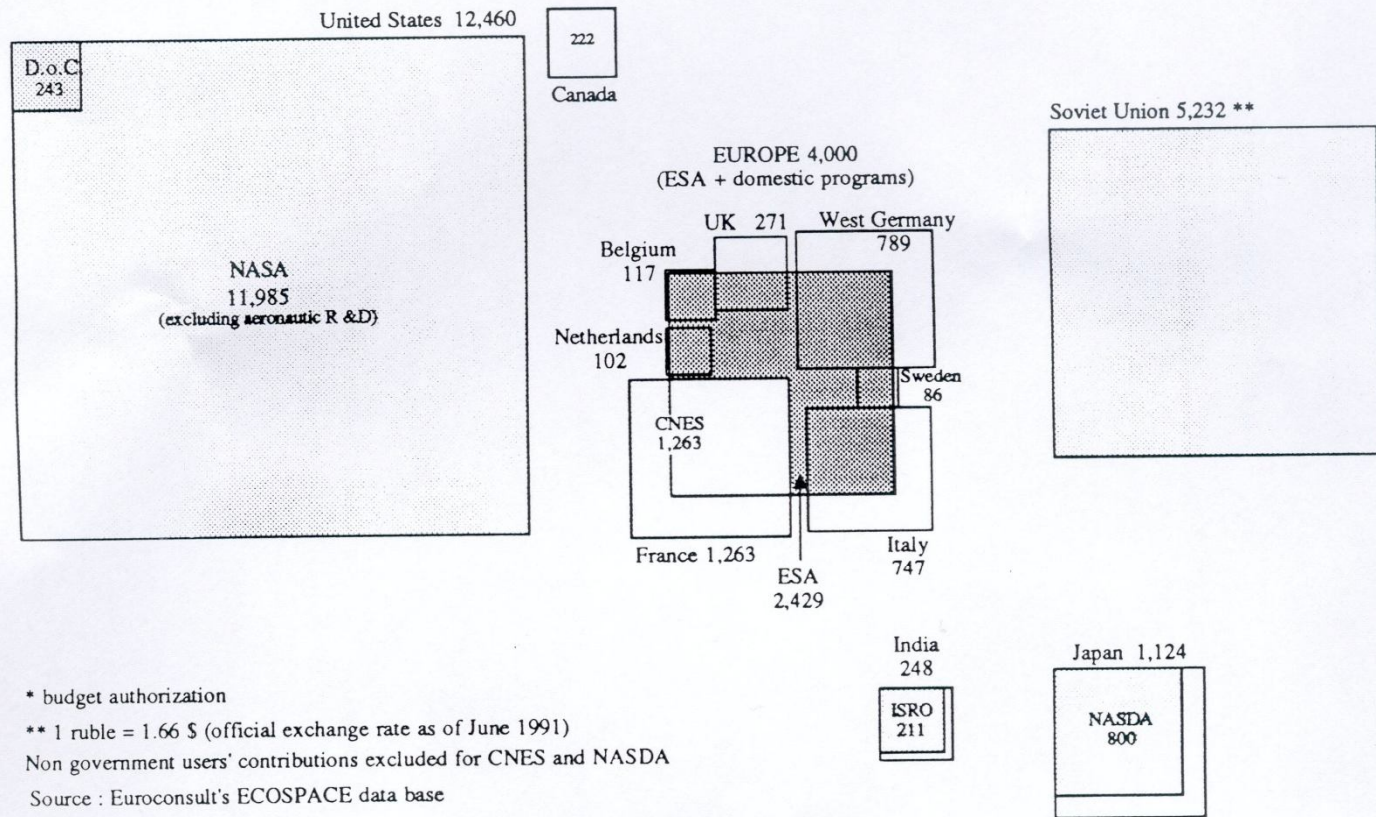
March 18, 2011



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Our World 20 Years and Ago

1990 Civil Budgets for Space* Throughout the World (USD in millions)



* budget authorization

** 1 ruble = 1.66 \$ (official exchange rate as of June 1991)

Non government users' contributions excluded for CNES and NASDA

Source : Euroconsult's ECOSPACE data base

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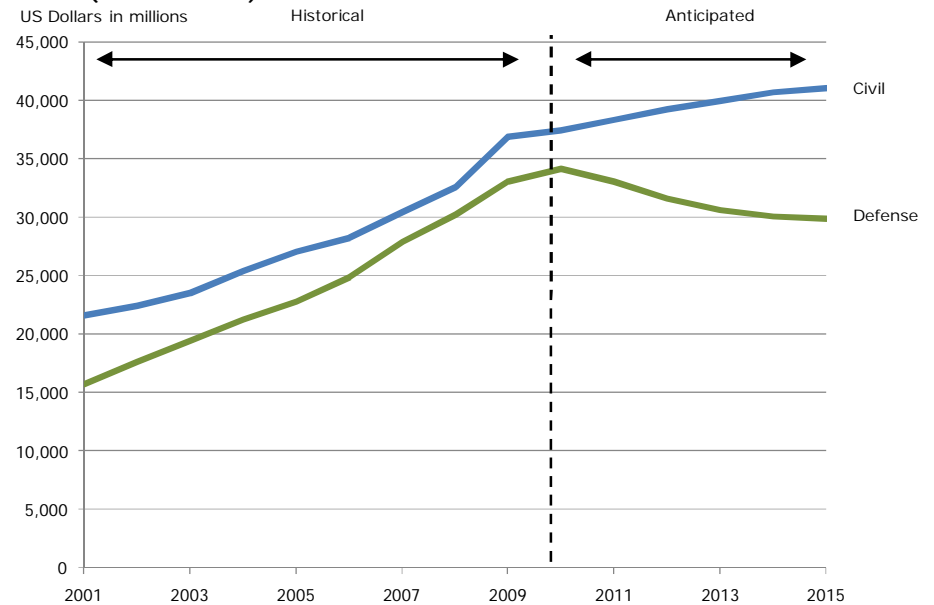


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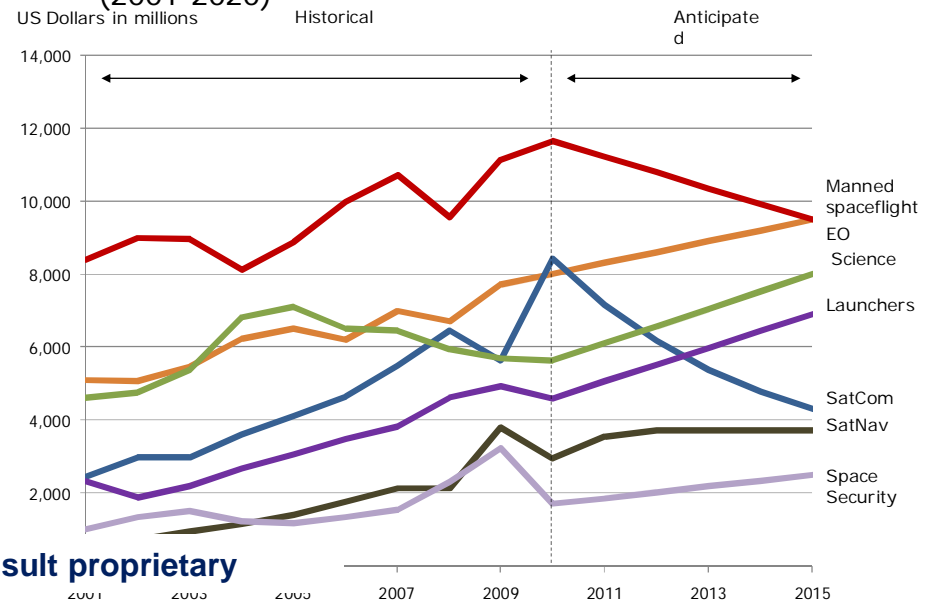
GLOBAL GOVERNMENT SPENDING ENTER INTO DECELERATION PHASE

- ❑ Following a peak funding level in 2010, government budgets for space programs are anticipated to stabilize at \$70 billion
- ❑ Most governments to come back to strict financial policies following massive investments to sustain their economy
- ❑ Cyclical nature of investment in some space applications (eg defense) to influence future trends
- ❑ Global civil space spending to be sustained thanks to dynamisms of new leading nations and new comers

World Government Space Expenditures (2001-2020)



World Government Expenditures by Application (2001-2020)

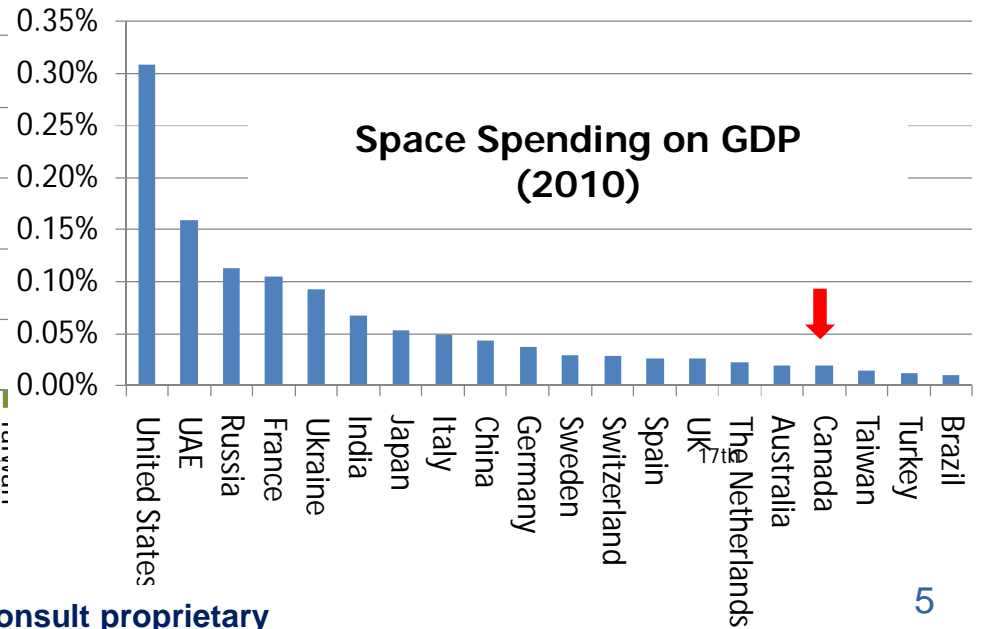
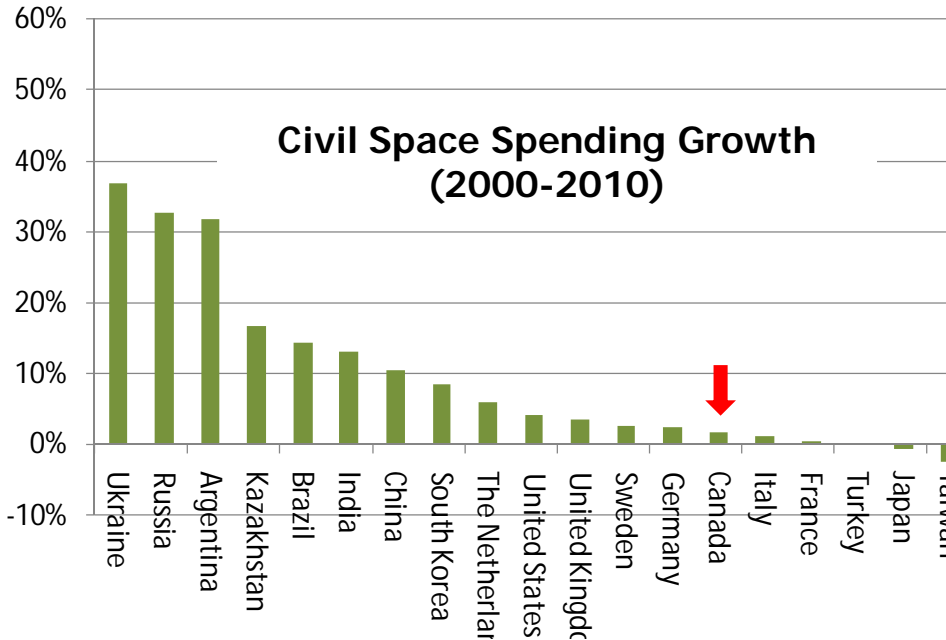
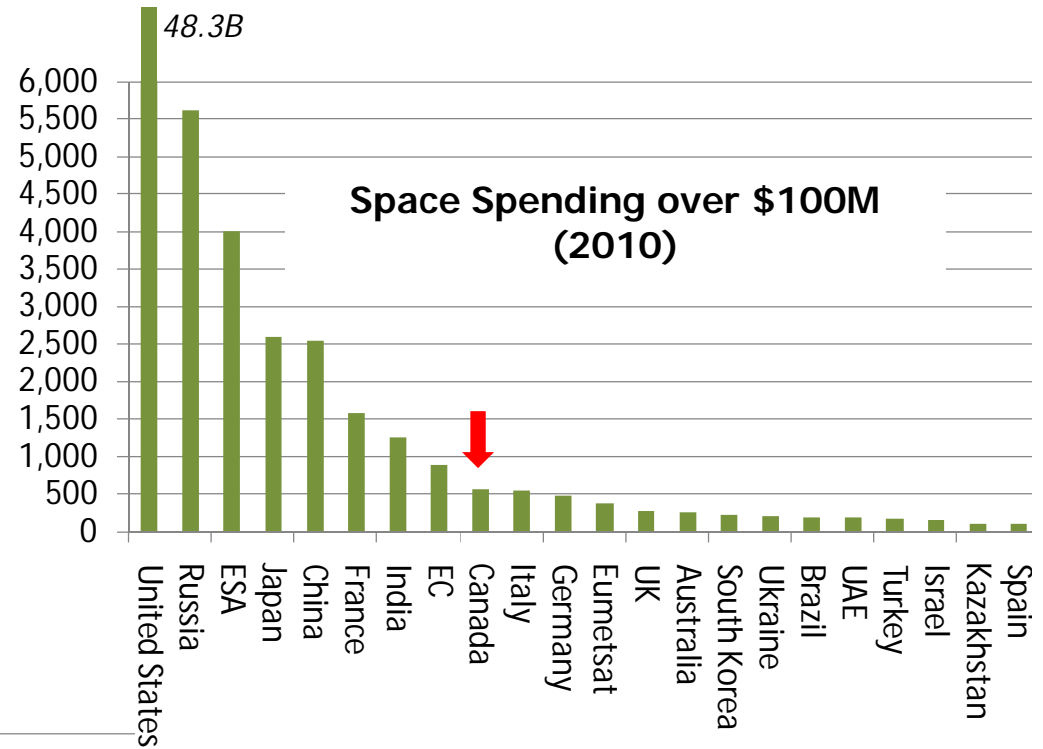




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BENCHMARKING CANADIAN SPACE PROGRAM

- ❑ CAN\$ 626M for civil and defense programs, 9th largest space budget
- ❑ Recent funding boosted by DND and extra funding to CSA
- ❑ Related to GDP, slips to 17th position
- ❑ Civil space : 2% CAGR last 10 years, ranking 14th



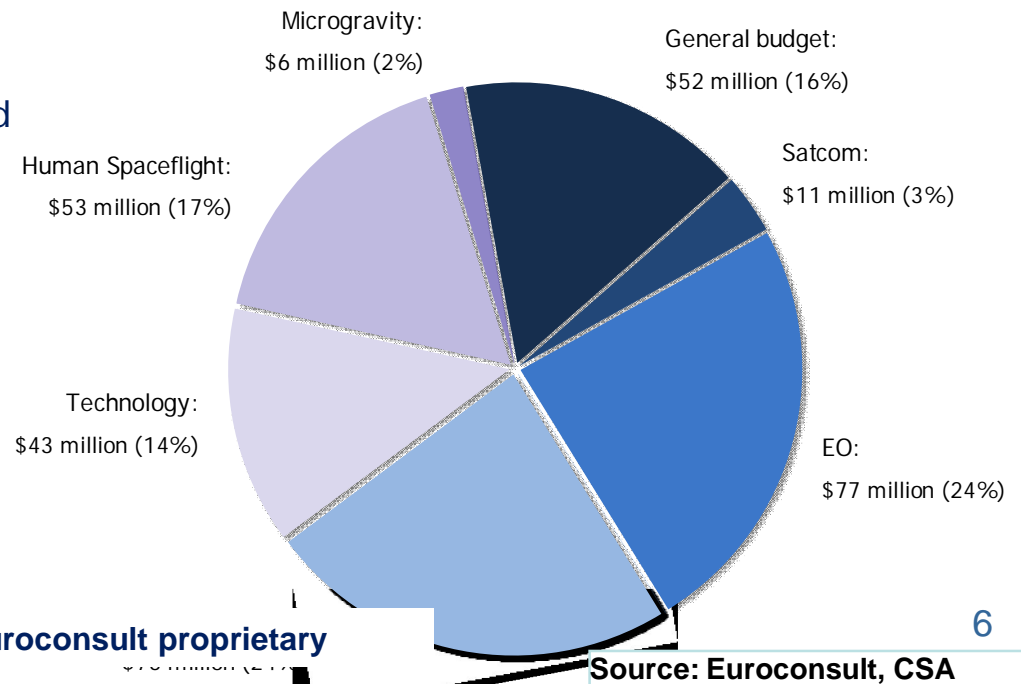
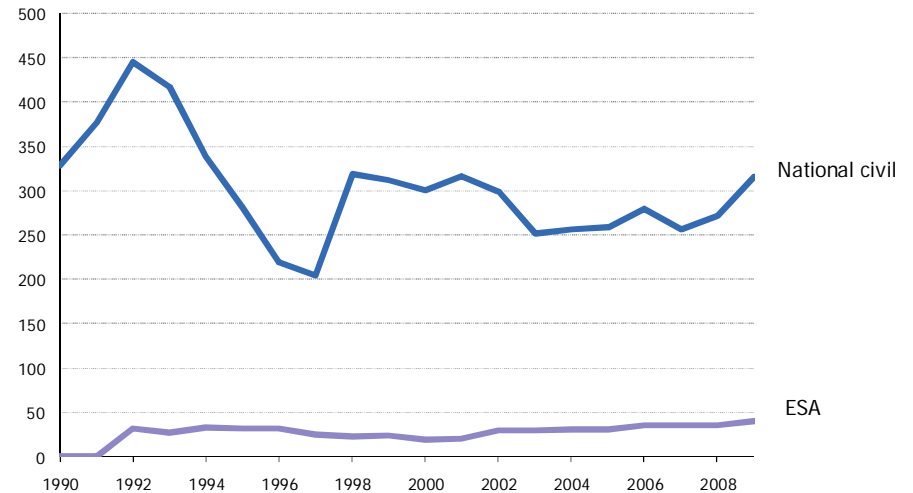


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CSA Budget Trends

- ❑ Stagnated between C\$250-300M for the last 15 years
- ❑ Currently more dynamic with around 10% growth annual funding from government to finance new projects.
- ❑ 2010 funding at C\$391M, to pass C\$400M in 2011 peak funding
- ❑ Investment driven by
 - ❑ EO: RCM, ClimateSat
 - ❑ Science / Exploration: robotics and rovers
 - ❑ Technology development: M3MSat, Cassiope, NEOSSAT...
 - ❑ Satcom has become a marginal area of funding. Future commitment towards PCW?
 - ❑ Launcher not an area of investment though discussions around indigenous small sat launcher

CAN Dollars in millions





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Selected Challenges for the Canadian Space Program

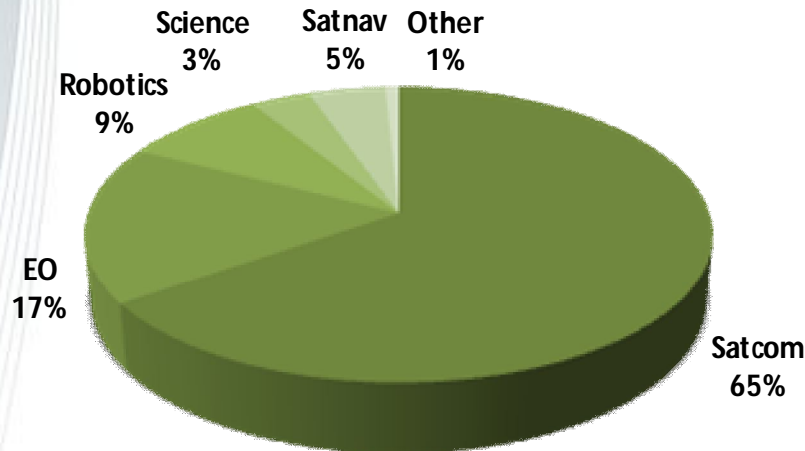
- The Canadian space program has had to deal with tight financial resources due to permanent budget tensions
- This budget situation has pushed the CSA to invest in selective priority areas, building on the strengths and existing capabilities of the Canadian space sector, and has left little room for the development of new capabilities on its regular budget.
- Tradition to support the industry in developing pioneer technologies: Robotic, Radar, Broadband
- Recently re-focus towards servicing government user needs with the development and procurement of operational systems (PCW, RCM) and demonstrations (NEOSSAT, SAPHIRE, M3MSat...)
- Difficulty to formulate a national space policy highlights uncertain domestic governance and leadership

Revenues of the Canadian Space Industry

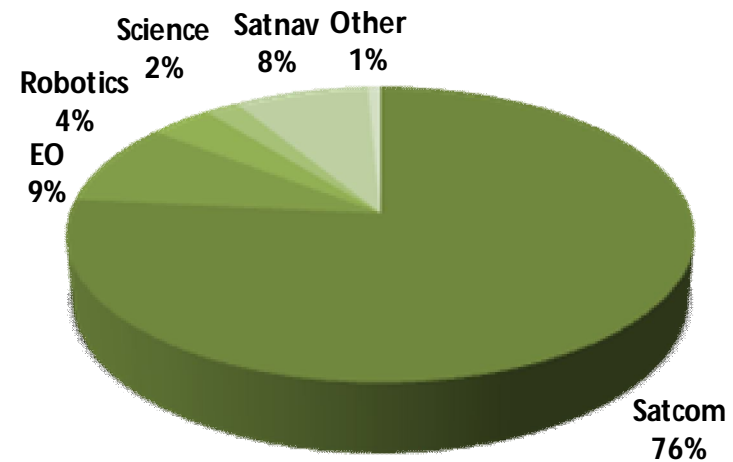
2000: \$1.43B



2009: \$3.03B



Source: CSA



- Industry develops though mostly outside the remit of government programs
- Satcom and Satnav represent 84% of Can space industry revenues though only 3% of government investment
- EO, robotics and science highly dependent on CSA,s programs

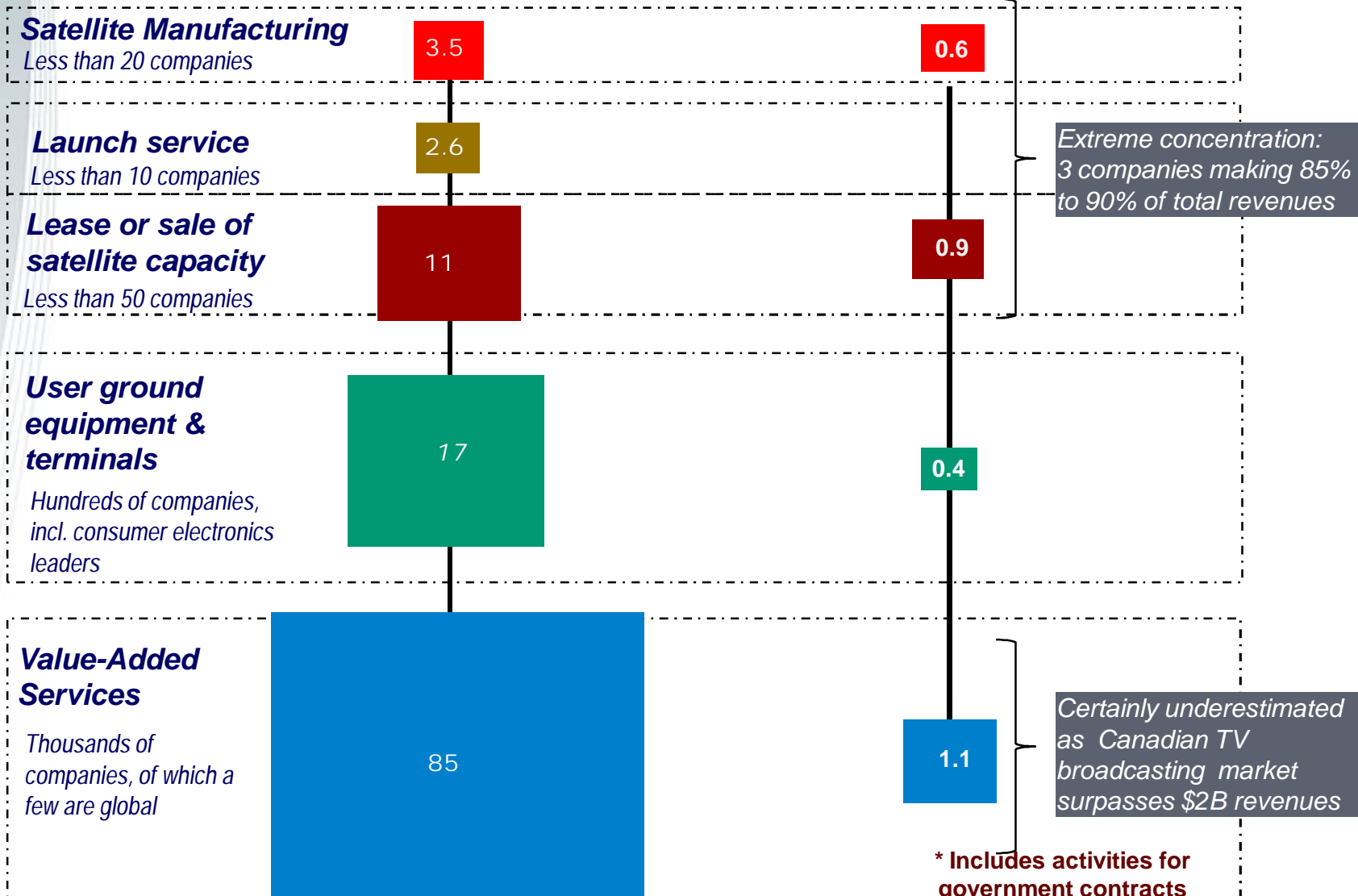


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The Satellite Value Chain

WORLD COMMERCIAL MARKET

CANADA SPACE INDUSTRY*





Canadian Space Sector Value Chain

SEGMENT	09 rev. 10Y growth	KEY FEATURES
Satellite Manufacturing	619M +3%	<ul style="list-style-type: none"> ✓ 2 prime companies dominating with sizeable international business. ✓ A few new entrants for small sat prime ✓ a large base of niche equipment suppliers ✓ Low margin, highly competitive business ✓ How to sustain capability is critical point
Satellite operation	880M +193%	<ul style="list-style-type: none"> ✓ 3 companies operating Satcom and EO ✓ Telesat making 90% of revenues ✓ High margin and global business ✓ Reflected by ownership.
Ground equipment	377M +65%	<ul style="list-style-type: none"> ✓ A few dominant players ✓ Most opportunities in export markets where very large companies compete. ✓ Lack of significant domestic market impact competitiveness and profitability
Satellite service	1160M +99%	<ul style="list-style-type: none"> ✓ Highly fragmented market with small, local and very specialized companies ✓ Vertical integration and profitability as key issues ✓ A few national giants (Stratos, Bell Express Vu..) but very few with truly global activities ✓ Satcom, esp TV, represents likely over 85% revenues



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High Level SWOT of the Canadian Space Sector

STRENGTHS

- ✓ Pioneer position in some leading edge space technologies
- ✓ Renewed government commitment to expand national space capabilities
- ✓ Positive budget growth in a context of strong financial pressure worldwide

WEAKNESSES

- ✓ Pioneer position does not necessarily translate into business leadership or success
- ✓ Limited domestic market making industry dependent on export market
- ✓ Stronger leadership on national space policy and industry policy required



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High Level SWOT of the Canadian Space Sector

OPPORTUNITIES

- ✓ Increasing investment from DND opening the door for significant upside for industry
- ✓ Positive market dynamics for key Canadian applications (Radar, broadband, robotics)
- ✓ Further needs for partnerships between government and industry to meet programs cost and efficiency

THREATS

- ✓ Risk of growing disconnection between industry and government priorities
- ✓ Risks of losing national champions as they become targets for acquisition
- ✓ Is current industrial structure sustainable and competitive?
- ✓ Unclear long term funding stability



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THANK YOU!

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**Figures taken from Euroconsult report
“World Prospects for Government Space Markets”, 2011.**