

The future of commercial space

Opportunities along the value-chain

Content

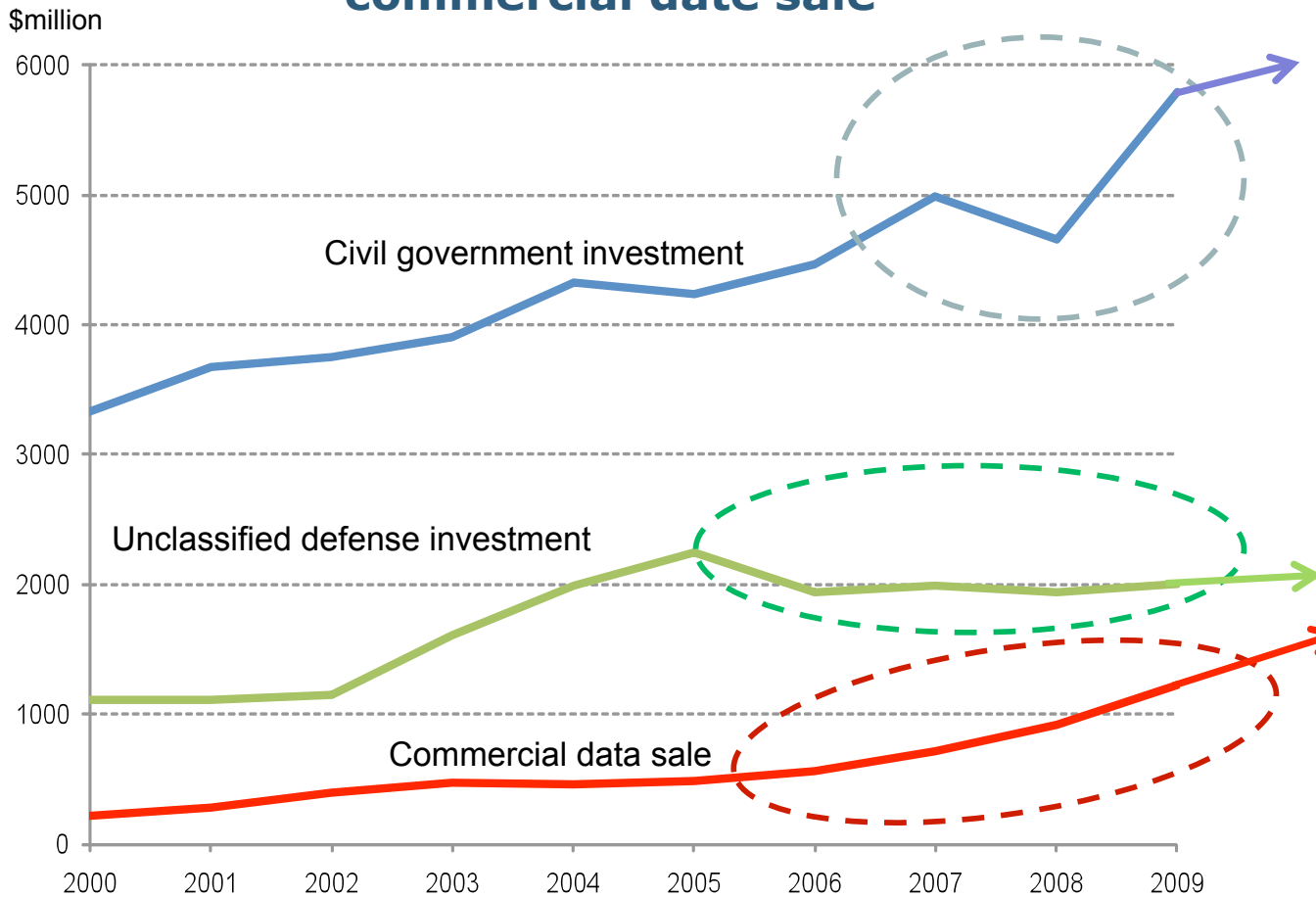
- Snapshot
- Government investment
- EO Satellites to be launched
- Civil and commercial manufacturing market
- Emerging EO programs
- Market for commercial data
- Drivers and challenges for future growth

Snapshot

- 128 satellites launched for civil Earth observation and meteorology applications over 1999-2008
- 24 countries launched Earth observation satellites by 2008
- Majority of satellites launched from government space agencies
- Commercial data market surpassed \$1 billion in 2009
- Government the key market <80% custom for commercial data and services

Government investment

EO government investment & commercial data sale



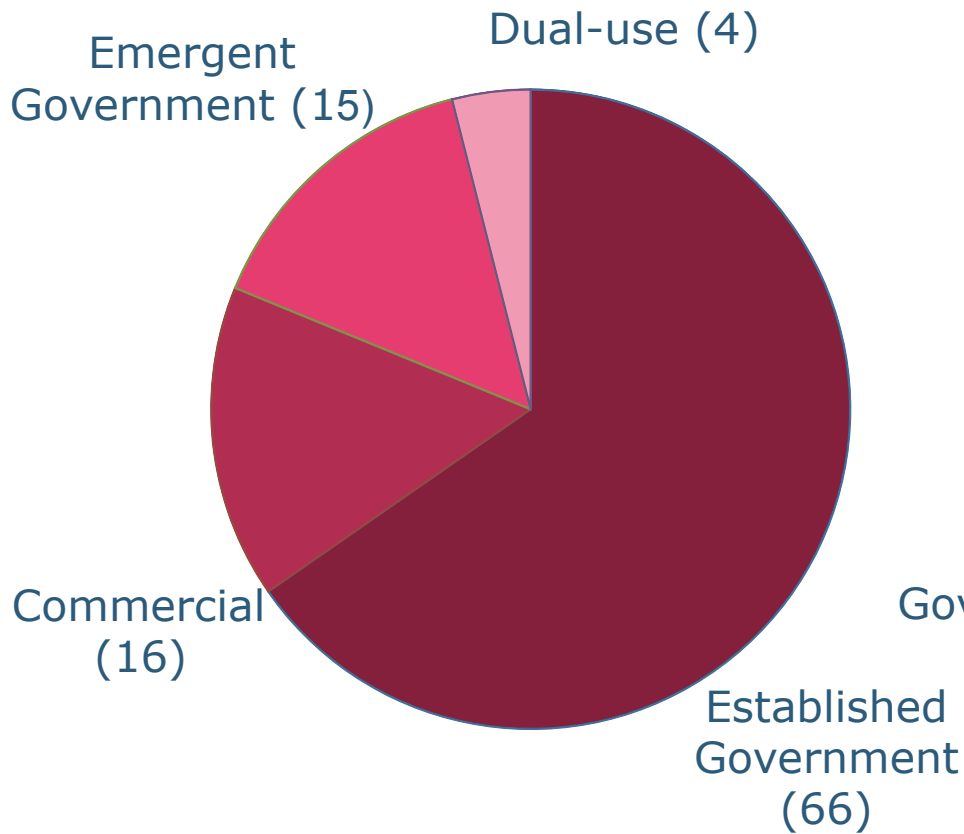
Growing investment in environment applications and emerging initiatives

Static growth – sector witnessing increasing cross-over with dual-use and commercial

Witnessing strong growth with defense the first application

EO satellites to be launched

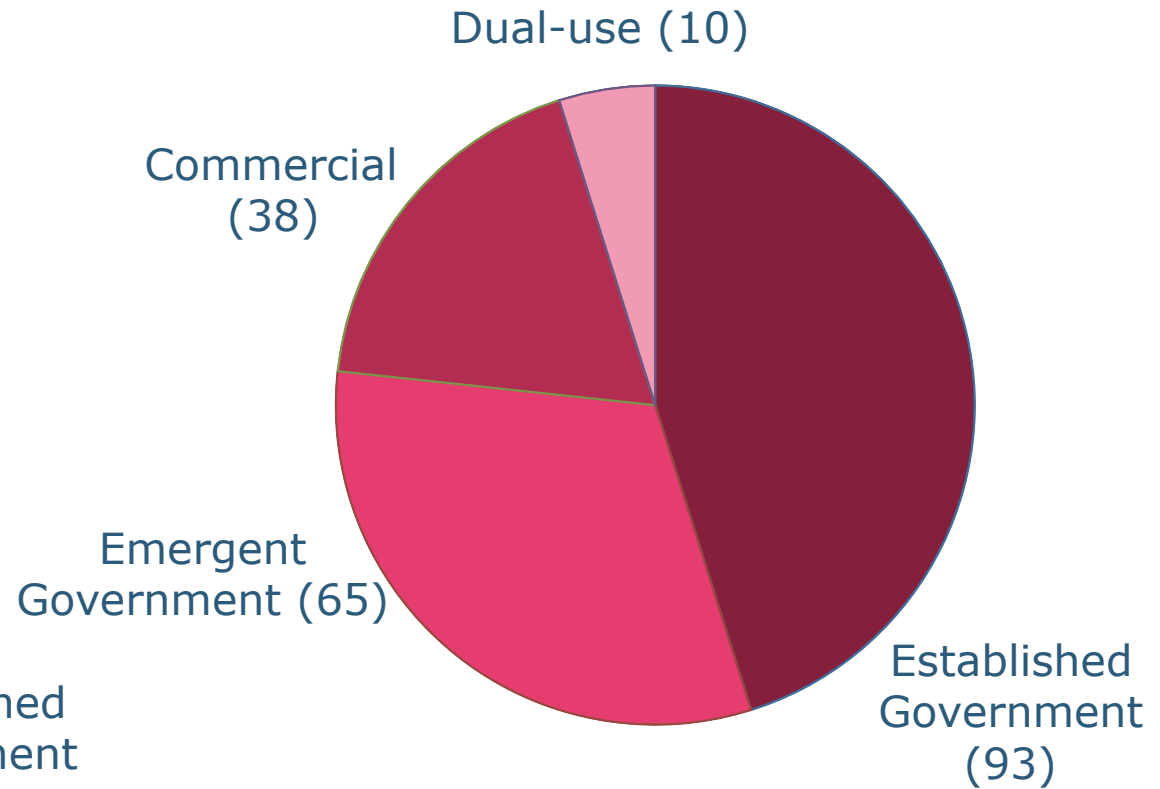
1999-2008



Total satellites: **101**

Total country/agency participation: **24**

2009-2018 forecast*



Total satellites: **206**

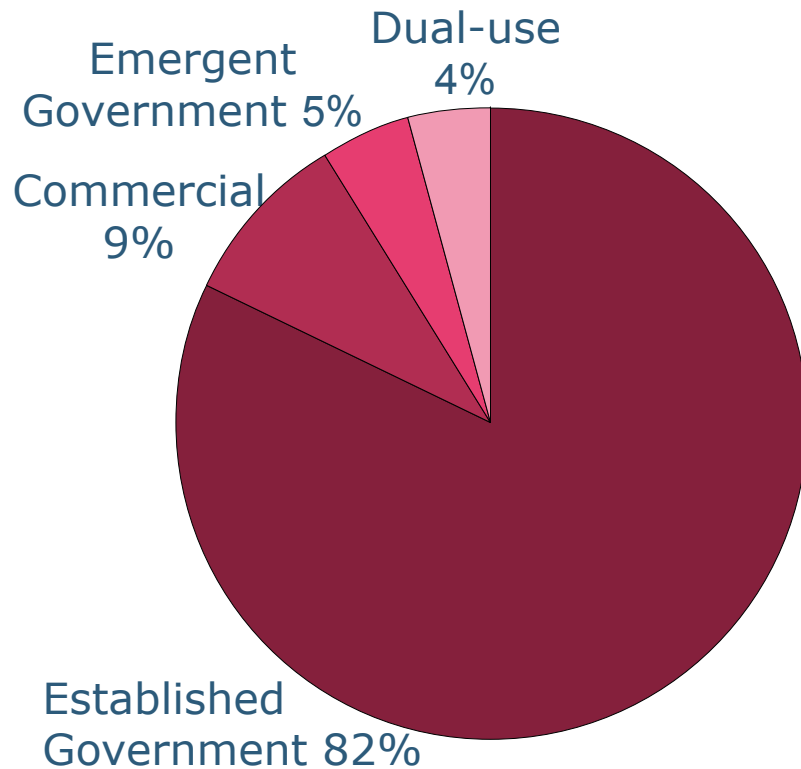
Total country/agency participation : **34**

*Not including Meteorology specific missions and defense. Note : China institutional programs might include military missions

Civil and commercial manufacturing market

1999-2008

Estimated Total: **\$16.6 billion**

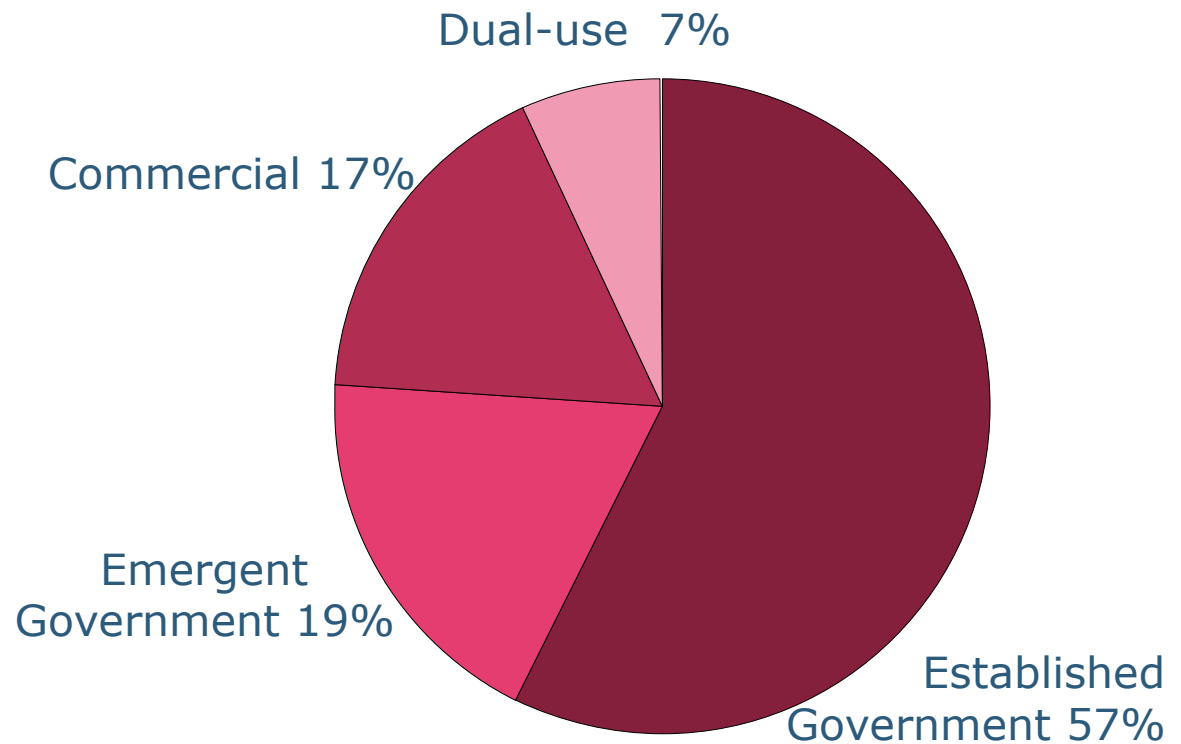


Total satellites: **101**

Average revenue /satellite: **\$165 million**

2009-2018 forecast*

Estimated Total: **\$19.3 billion**



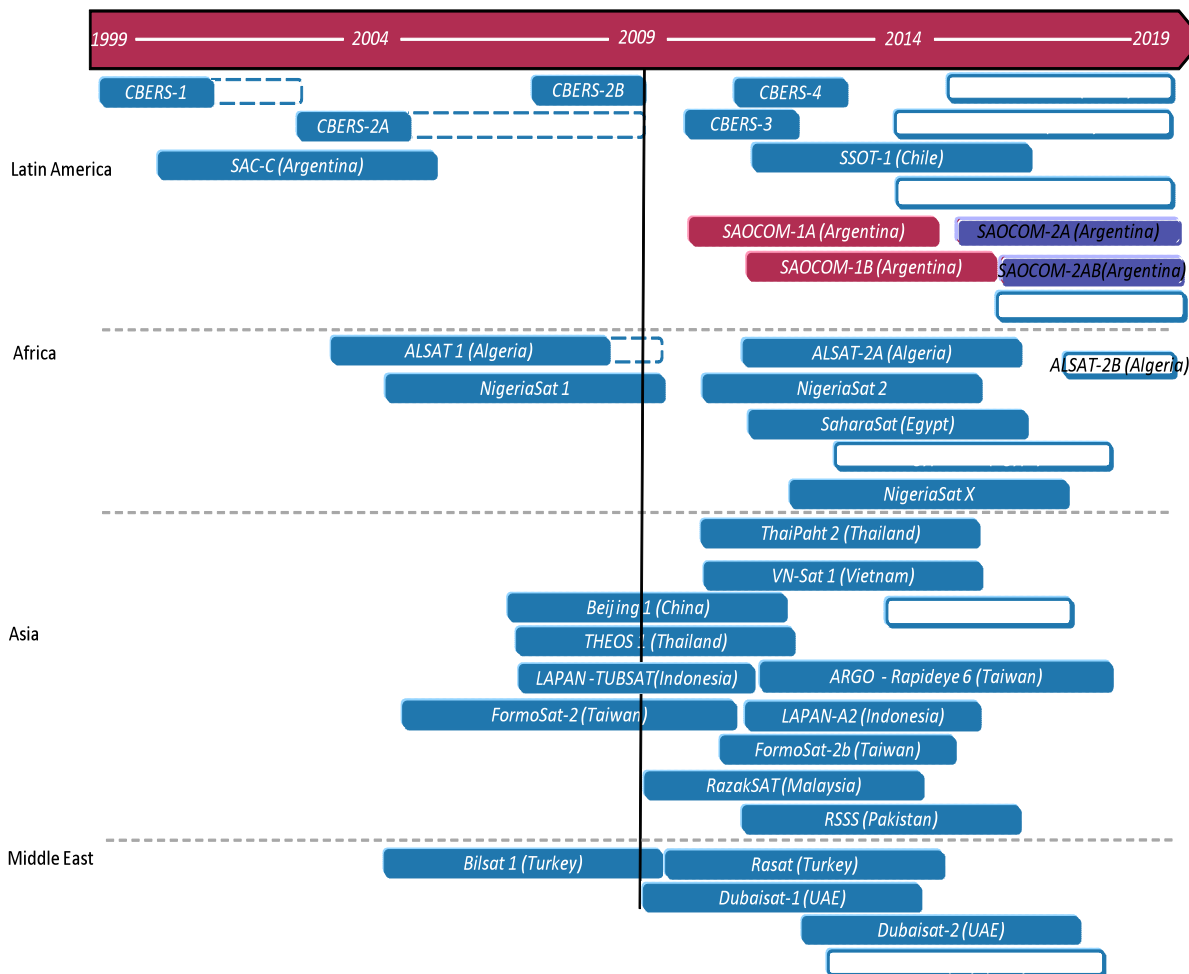
Total satellites: **206**

Average revenue/satellite: **\$94 million**

*Not including Meteorology specific missions. Note : China institutional programs might include military missions

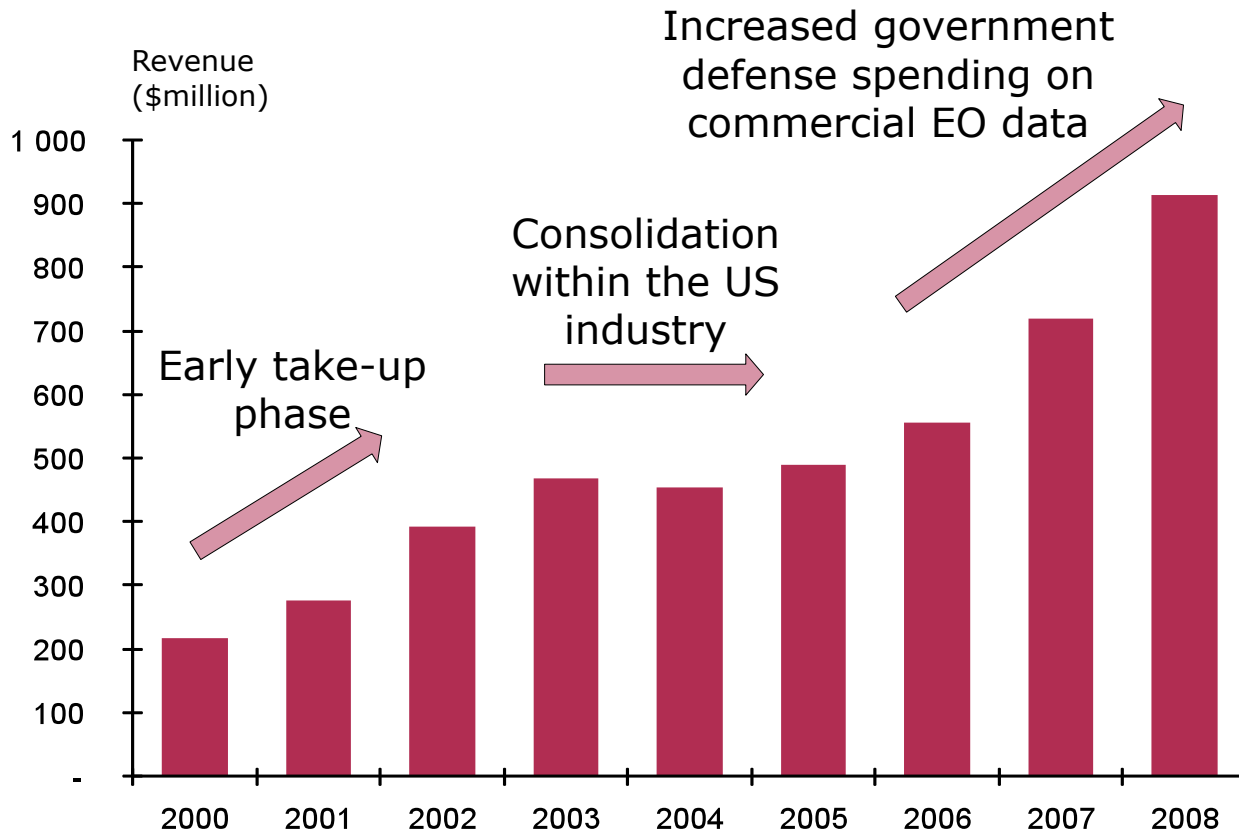
Emerging EO programs

Emerging EO Satellites: Launched to 2008, Planned/Anticipated: 2009-2018



- 32% of all EO satellites to be launched over 2009-2018
- Countries look to gain technology know-how and build on experiences – opening up an export manufacturing market
- Low cost satellites with direct return at economic and social levels
- 2nd Generation launched have been/will be more capable than the first

Market for commercial data



- Growing number of companies looking to tap-into the commercial data market
- Commercial data sale has risen by 23% CAGR over the last 3 years: driven by high-res optical data (87%)
- Governments key market for defense and security applications: 62% of commercial data sale in 2008

Drivers and challenges for future growth

- Market for commercial data anticipated to reach \$3.9 billion by 2018

Market Drivers	Market Challenges
<p>Defense and security requirement to remain the key driver for data sale</p> <p>Growth opportunities for commercial sale to both international government and private enterprise</p> <p>Focus on high-res optical evolving: increasing accuracy and timeliness of delivery</p> <p>Emergence of high-res/accurate commercial radar</p>	<p>Need to expand customer base beyond local government: over-dependence can be a risk</p> <p>Increasing competition will drive vertical integration: gap between operation, distribution and services closing to expand market share</p>
<p><i>Low-cost data both a risk and opportunity for the sector?</i></p> <ul style="list-style-type: none"> Data cost an issue to develop value-added services Increasing Low-cost/free operational data sources and mechanisms for services development such as GMES will stimulate the market Commercial operators to reap benefits later? 	



Thank you

Graphs & data from Euroconsult research reports:

Satellite-based Earth Observation, Market Prospects to 2018
(2009 edition)

Profiles of Government Space Programs (2010 edition)

Adam Keith

keith@euroconsult-na.com