

A satellite with large blue solar panels is shown in space, orbiting Earth. The Earth's surface is visible in the background, showing clouds and landmasses. The satellite is the central focus, with its various instruments and antennas clearly visible.

En vision for rumfart i Danmark:

Er der overhovedet et behov?



**Russia**

- Russian civilian space agency (Roscosmos \$1 Billion in 2006)
- Investment multiplied by approx 10 over the last eight years
- Leading edge technology has become the second national priority, therefore the accelerated investments in space.

**Japan:**

- Civilian Space activities \$2.2 billion in 2006
- Space development will accelerate
- Space activities are seen as a recognized vehicle for technological progress and an efficient export trade vector

**China**

- CAST, responsible alone for design and production of satellites, \$700 Million, growth rate 30% 2004-2006.
- Dr Sun Laiyan, Administrator, China National Space Agency, Beijing November 27 2006: "Innovations of major social and economic dimensions will indeed stem from maturity of space technologies"

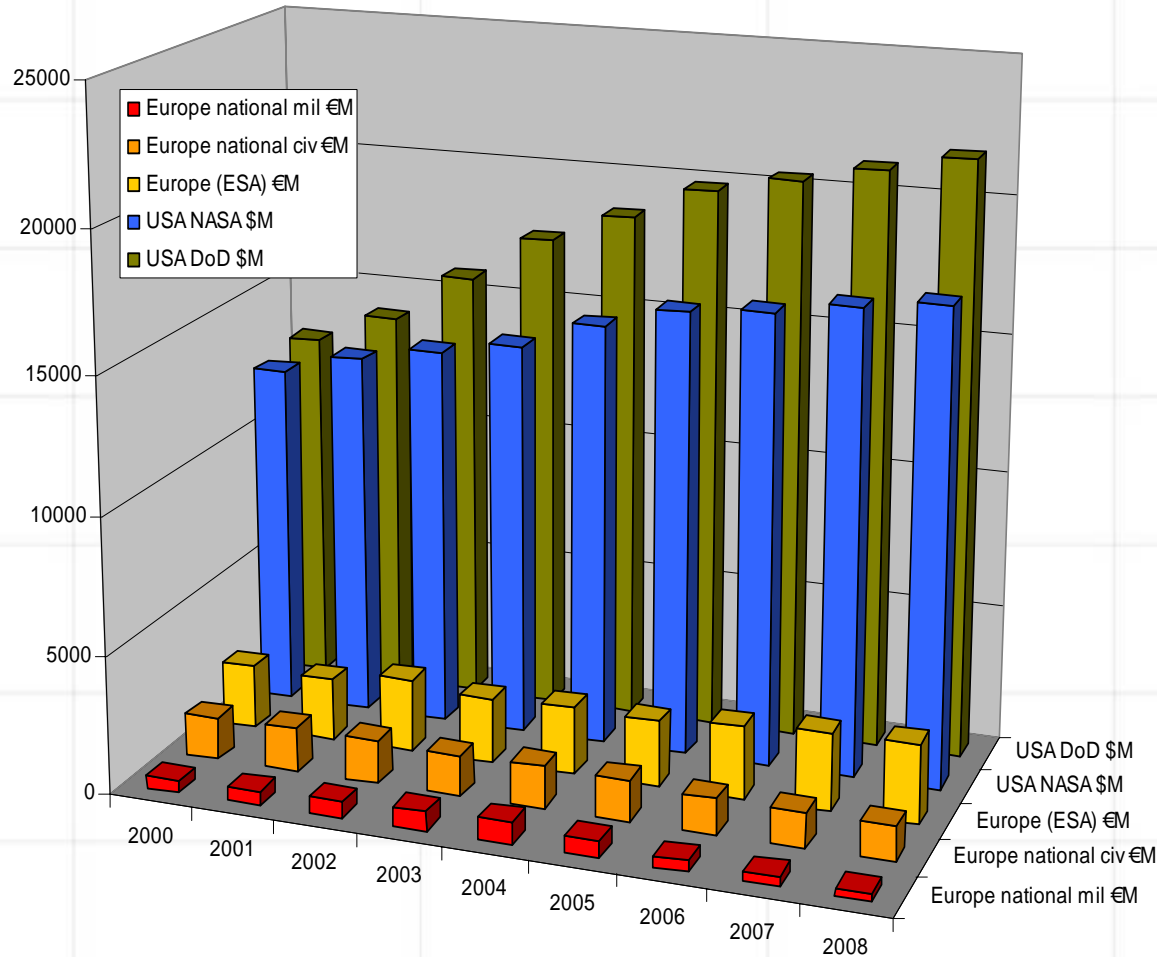
**India:**

- Indian Space Research Organization (ISRO) saw a 17% growth in investment from 2005 to 2006

**Brazil:**

- Set up of space activity program in 2005 (end 2014), initial funding \$100 Million to reach \$200 Million
- Contribute to intensify R/D in strategic domains (e.g. Sensors, SAR, nanotechnology, ITEK)

# USA vs Europe – space budgets 2000-2008: US five times bigger



## **Space Policy: Daring or Decline, Christian Cabal, Member of parliament, Henri Revol Senator, 2007**

- *Experience shows that space has an increasingly important technological and economic dimension above and beyond any political factors, making the space sector even more essential in an economic development context*
- Hence return on investment is significant. EU's own analysis show 1-8.

## **Space recognized as a strategic vehicle to achieve growth in EU**

- Space written into the treaty
- A European Space Policy has been formulated

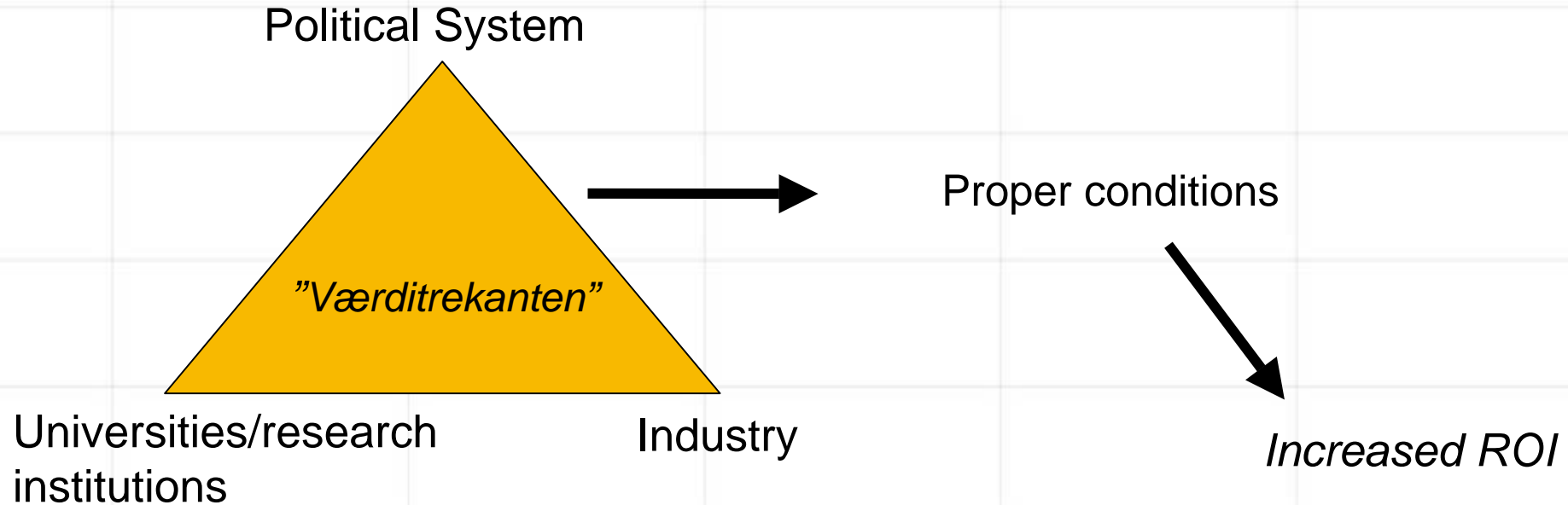
## **"Footnote"**

- EU ROI factors shown in UK, Norway, Sweden (innovation reports), France, "DK" Terma DI presentation 2007...

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Er der overhovedet et behov?

*JA, for vi har ikke råd til at lade være -  
hverken politisk (EU) og ej heller økonomisk  
(samfundsmæssigt ROI)*



Knowledge on relevant technologies, possibilities and limits

**Technology**

**Context**

Knowledge of products, systems, production and other market-related issues

Knowledge of the user needs. What do they want and how can we help

**Domain**

**Political system**

Incubator for creating lead markets by designing innovation policies (from funding programmers and public procurement to regulations and standard setting)



- So far only very limited success has been achieved when talking about dedicated new/enhanced investments → *Enhance communication ("the tool of space"), space research and satellites goes hand-in hand.....*
- The Barcelona agreement dictates more investments in research and innovation. Consequently, 11 Billion DKK to "reach" the system from now until 2010, further 4.9 Billion DKK in 2011 and 5.2 Billion DKK in 2012 (21 Billion DKK from now until 2012) → *Do not make funding constraints against space missions*
- Denmark is contributing less than the ESA regulation prescribe in the optional programs (approx. 150 MDKK) → *At least come to same level*
- Success on the non-European market prescribe qualification on the home market → *Same ESA level argued with a Danish Space program*
- Missions → *Build upon the strength in the triangle (e.g. politically climate is on the agenda, Danish research is world wide recognized, industry can innovate, develop, and build the spacecraft)*