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**space-tec**

PARTNERS

**an independent perspective  
on the future of GMES**

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## IT IS DIFFICULT TO READ INTO THE FUTURE OF GMES...

- No crystal ball
- No insight into the Commission's GMES strategy beyond the official documentation
- No insight into Member States' (contradictory) positions

## GMES IS SOMETIMES HARD TO SELL

- GMES *envies* Galileo (in MFF, easy to explain)
- The sammelsurium\* syndrome (diverse stakeholders)
- User pull or Space industry push?
- Past overselling of Earth Observation
- Benefits for EU Policy support not transparent to member states
- The excess luggage metaphor (why GMES?)

\* hotchpotch, fourre-tout, ensalidilla rusa, guazzabuglio



- Sunk costs
- Frustrated users (at EU and Member States level) who have already invested time and money
- Dependency on non-EU data sources
- A blind EU in policy areas of planetary importance (Climate, Proliferation, Regional crises etc.)



- No delays and cost overruns
- Demonstrated operational (or pre-operational) status for many services
- Thousands of engaged users (at global, EU, Member States and regional/local level)
- GMES is affordable: one € per EU27 citizen!
- GMES qualitative benefits are clear and obvious
- GMES quantitative benefits are superior to costs in all scenarios and hypotheses

<b>Environmental management</b>	Protecting the environment from man-made and natural degradation
<b>Resource management</b>	Managing scarce natural resources and ecosystems
<b>Emergency management</b>	Anticipation, response, recovery and reconstruction in the event of disasters
<b>Security and Humanitarian applications</b>	More effective and better targeted aid and assistance in time of crisis Support to activities in border control, maritime surveillance and EU external action.
<b>Wider economy</b>	Contributing to industry development through the downstream sector and R&D spill-over.

<b>Land</b>	<ul style="list-style-type: none"> <li>• Planning in forestry and agriculture</li> <li>• More effective compliance monitoring</li> <li>• Improvements in urban planning</li> </ul>	<i>E.g.: <b>The Urban Atlas</b></i>
<b>Marine</b>	<ul style="list-style-type: none"> <li>• More efficient oil spill detection /monitoring</li> <li>• Management of marine resources;</li> <li>• Maritime navigation / traffic safety</li> <li>• Ocean modelling / forecasting.</li> </ul>	<i>E.g.: <b>Reducing fuel consumption for the Northern Sea Route, Oil Spill drift forecasts</b></i>
<b>Atmosphere</b>	<ul style="list-style-type: none"> <li>• Emission Monitoring, especially air quality</li> <li>• Forecasting of smog events</li> <li>• Support to air quality policymaking.</li> </ul>	<i>E.g.: <b>Eyjafjallajökull eruption April 2010, obsAIRve, AirText .</b></i>



<b>Emergency</b>	<p>Prediction of events / severity          More effective response and recovery          Damage assessment          Reconstruction and preventive measures.</p>
<b>Security</b>	<p>Reducing the costs of enforcement          Preventing drug trafficking, piracy and cross-border crime          Monitoring critical infrastructure          Supporting peacekeeping and crisis management operations.</p>
<b>Climate Change</b>	<p>Enhancements in ECV monitoring          Ensuring consistency and continuity of data supply          Enhancing the quality of EU policy advice on climate change.</p>

*E.g.: 2010 Haiti earthquake, Floods, Greek fires*

*E.g.: Monitoring the **energy pipelines** carrying natural gas from Russia to Europe, **Arab Spring**, South Africa **FIFA World Cup***

*E.g.: Uncertainty over **future sea level rise**, **understanding of Climate Change Dynamics**, **compliance monitoring***

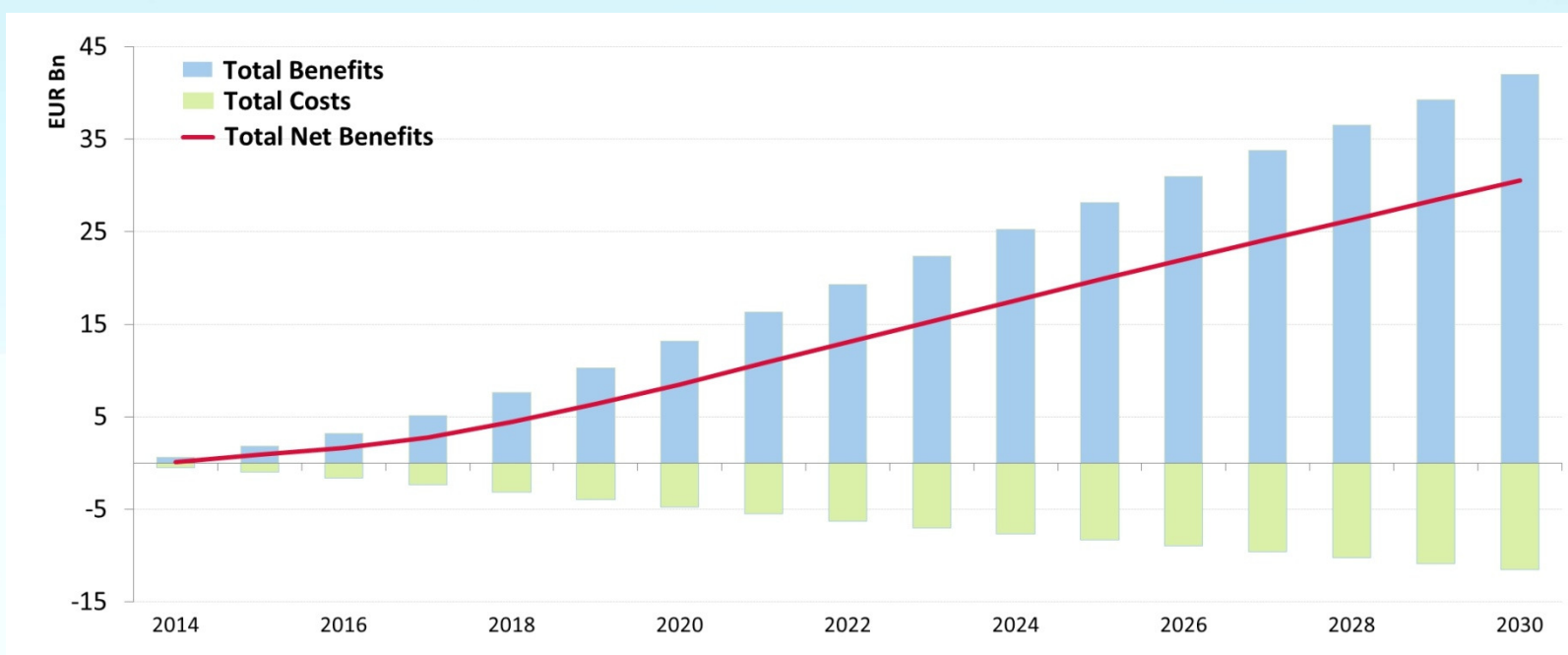


		Option A Baseline	Option B Extended	Option C Partial Continuity	Option D Full Continuity
<b>Options</b>	<b>Sentinels</b>	No continuity	Extended continuity	Full continuity	<b>Full continuity</b>
	<b>Contributing Missions</b>	Not all guaranteed	As in A	Limited support	<b>Enhanced support</b>
	<b>Services</b>	Operational , no upgrades	Operational, limited upgrades	Operational, upgrades, same scope as B	<b>As in C, with service evolution</b>
	<b>In situ</b>	Coordination only	Increased investment	As in B	<b>New investment</b>
<b>Results</b>	<b>Benefits</b>	2.1	10.7	29.4	<b>42.0</b>
	<b>Costs</b>	(2.1)	(4.7)	(9.1)	<b>(11.5)</b>
	<b>Net Benefits</b>	(0.0)	6.0	20.4	<b>30.5</b>
	<b>Benefit-Cost Ratio</b>	1.0	2.3	3.2	<b>3.7</b>

Source: CBA performed by Booz & Company and SpaceTec Partners

## Costs and Benefits

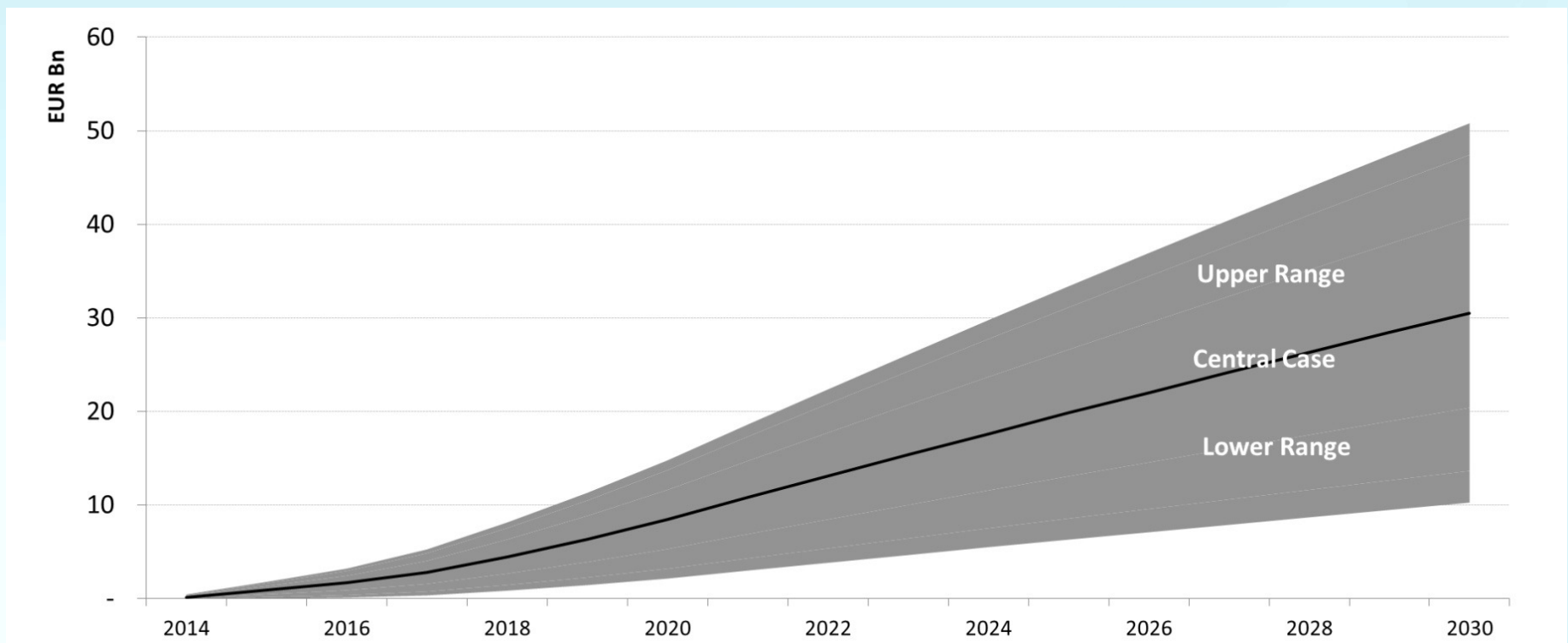
Option D “Full Continuity” Cost-Benefit Analysis (€ Billion, 2014-2030)



Source: CBA performed by Booz & Company and SpaceTec Partners

## Benefit Range

Option D “Full Continuity” Cost-Benefit Analysis (€ Billion, 2014-2030)



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thank you  
for your attention



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