

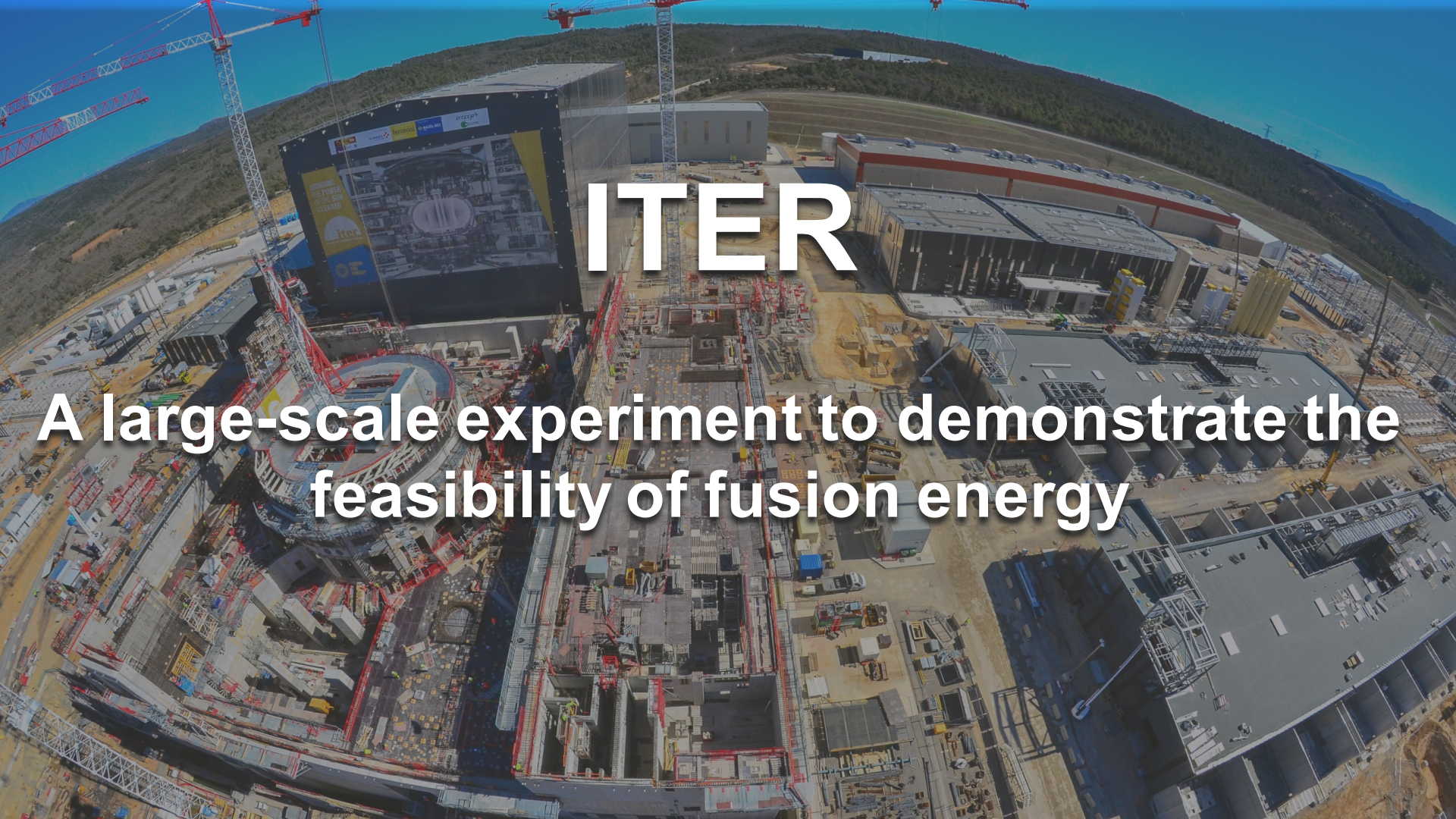


ITER

A role model for
science projects' collaborations?

Dr H.H. Altfeld

Head of ITER Project Control Office



ITER

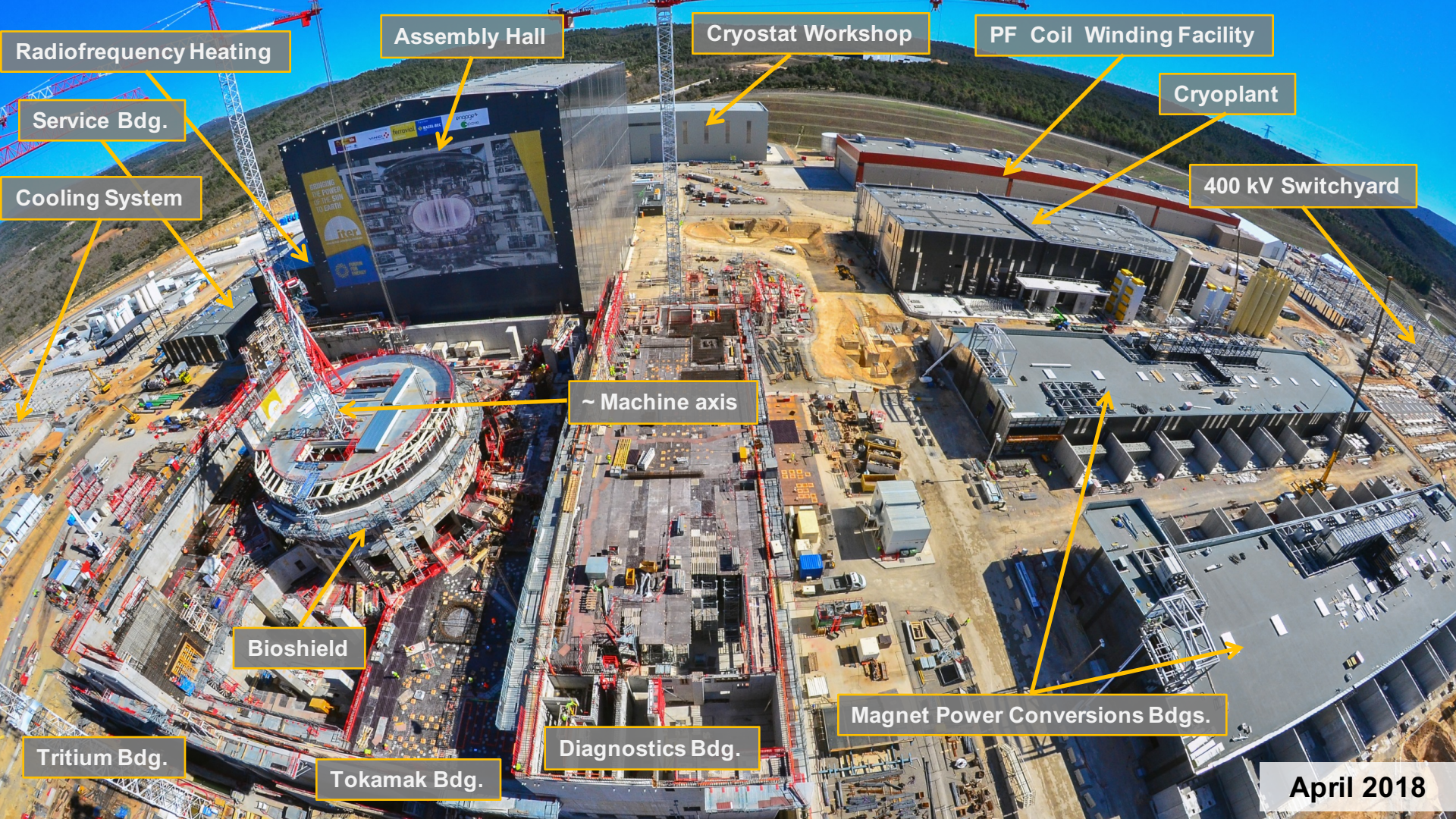
A large-scale experiment to demonstrate the feasibility of fusion energy

An aerial, wide-angle photograph of the ITER construction site. The central focus is the large, circular tokamak structure under construction, surrounded by various support buildings and infrastructure. Several large cranes are visible, some with their jibs extending over the site. The background shows a hilly landscape under a clear blue sky. The word "ITER" is overlaid in large white letters in the upper center.

ITER

A large-scale experiment to demonstrate the feasibility of fusion energy

A global scientific collaboration without equivalent in history



Radiofrequency Heating

Assembly Hall

Cryostat Workshop

PF Coil Winding Facility

Cryoplat

Service Bldg.

Cooling System

400 kV Switchyard

~ Machine axis

Bioshield

Magnet Power Conversions Bldgs.

Tritium Bldg.

Tokamak Bldg.

Diagnostics Bldg.

April 2018

Global challenge, global response

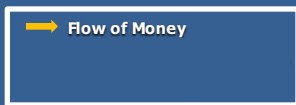


- 28 June 2005: The ITER Members unanimously agreed to build ITER on the site proposed by Europe
- 21 November 2006: The ITER Agreement was signed at the Élysée Palace, in Paris.

The seven ITER Members represent more than 50% of the world's population and about 85% of the global GDP

China EU India Japan Korea Russia USA

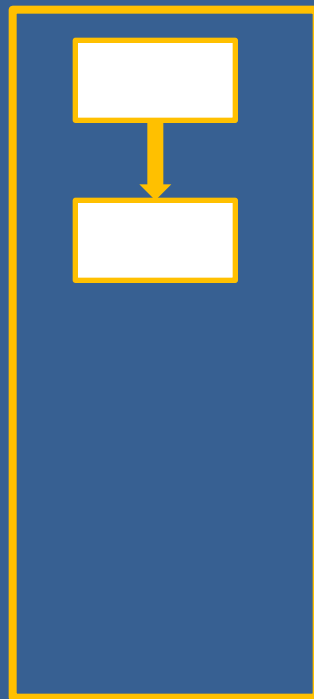
Governance Models



Government

Central Integrator

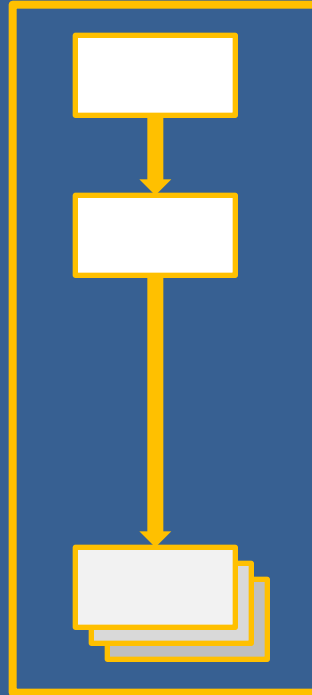
National



Governance Models



National



Government

Central Integrator

Supplier

Governance Models

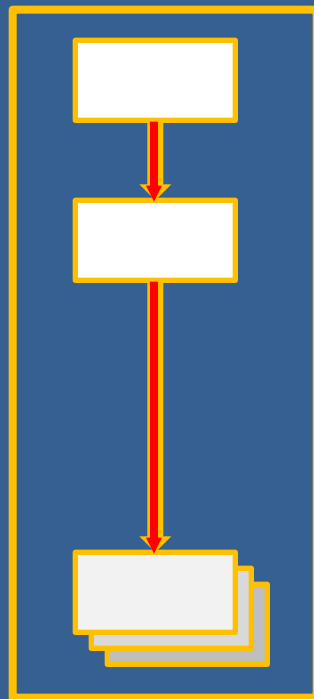


Government

Central Integrator

Supplier

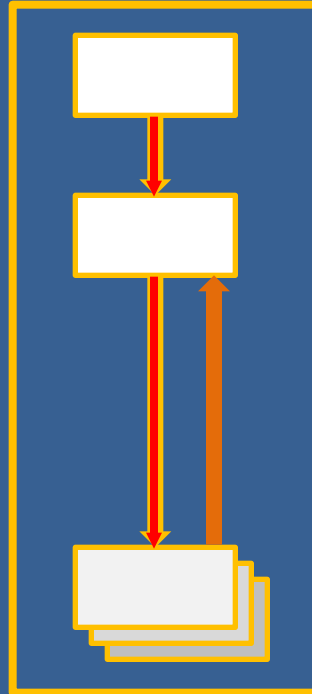
National



Governance Models



National



Government

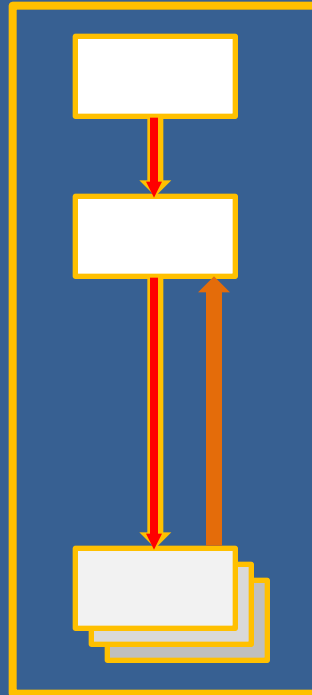
Central Integrator

Supplier

Governance Models



National



Government

Central Integrator

Supplier

Same Culture

in terms of

- Language
- Ways-of working
- Contracting
- Project Management
- Systems Engineering
- Etc.

Governance Models

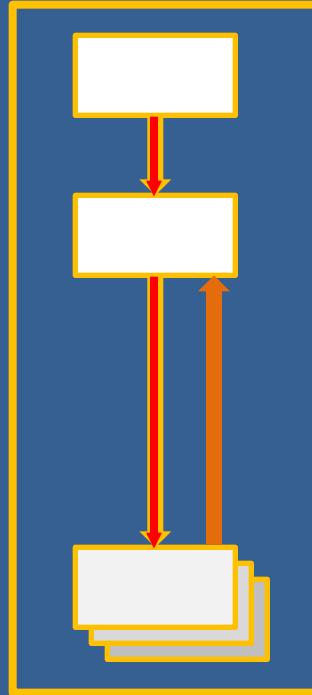


Government(s)

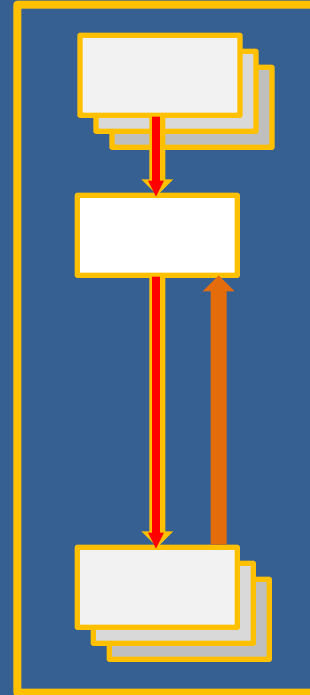
Central Integrator

Supplier

National



Regional



Governance Models

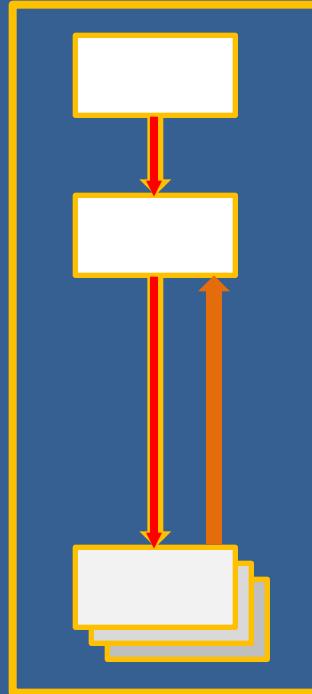


Government(s)

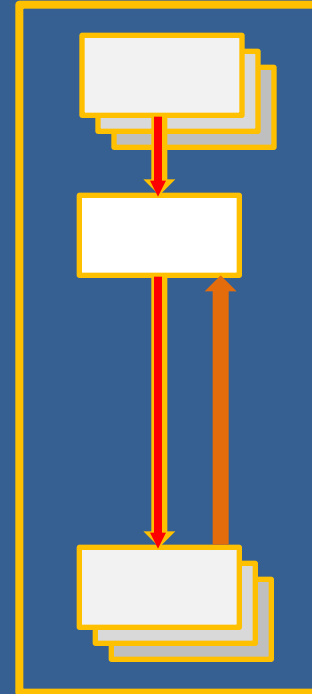
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Regional



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Governance Models

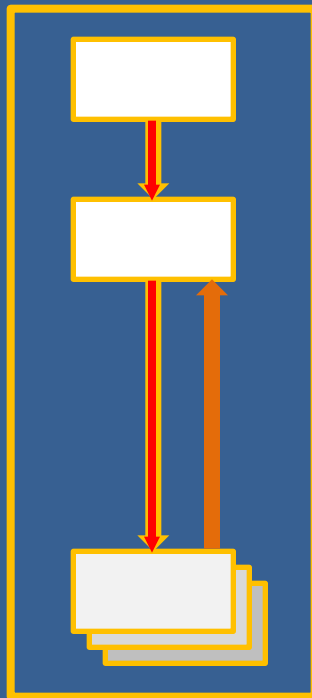


Government(s)

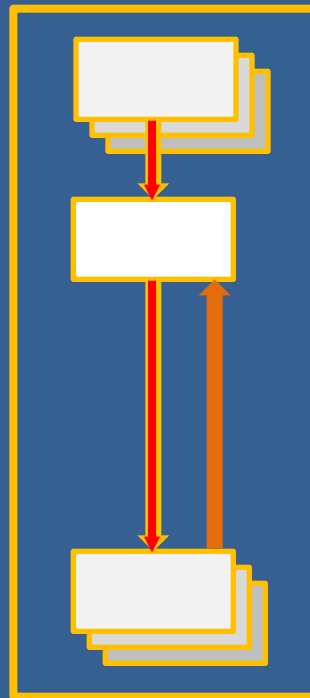
Central Integrator

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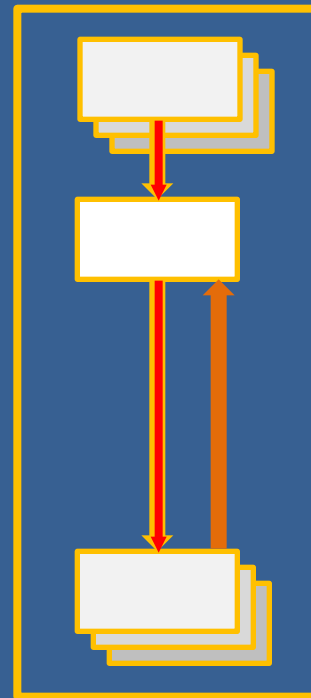
National



Regional



Global



Governance Models



Government(s)

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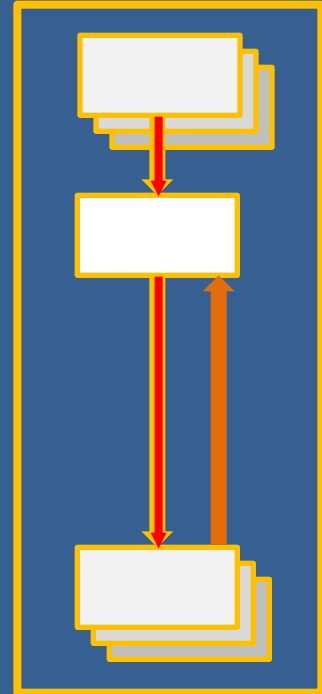
Supplier

Very Different Cultures

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- Etc

Global



Governance Models



Government(s)

Central Integrator

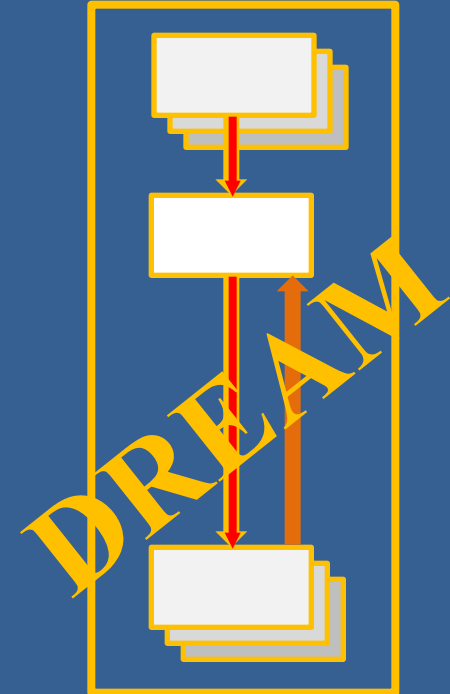
Supplier

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Governance Models



Government(s)

Central Integrator

Supplier

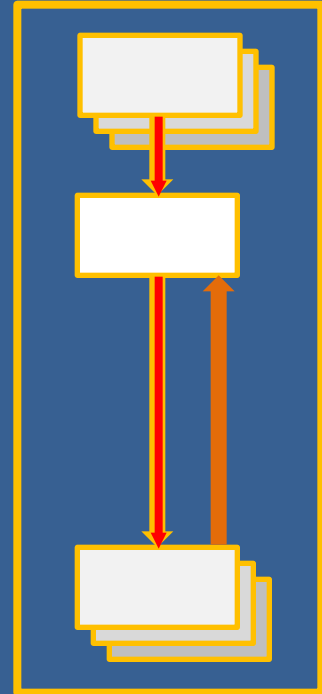
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→ A 'Translator' is needed

Global



Governance Models

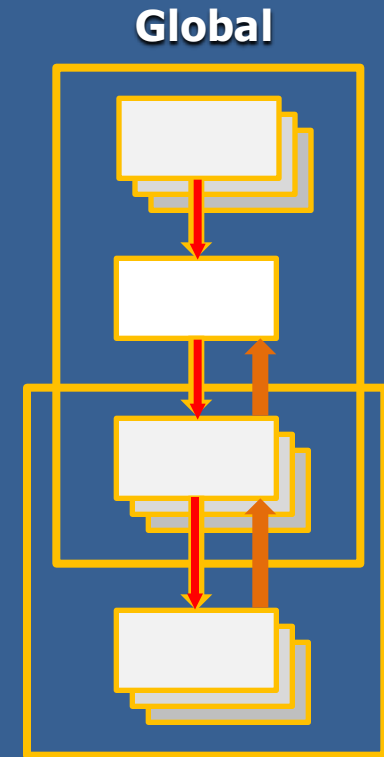


Government(s)

Central Integrator

'National Translator'

Supplier



Governance Models

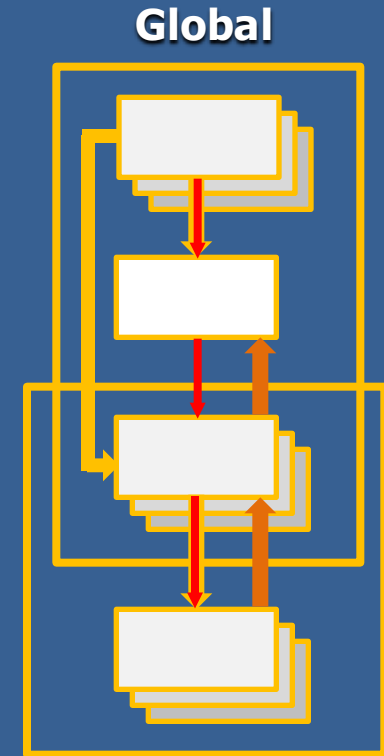


Government(s)

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'National Translator'

Supplier



Governance Models



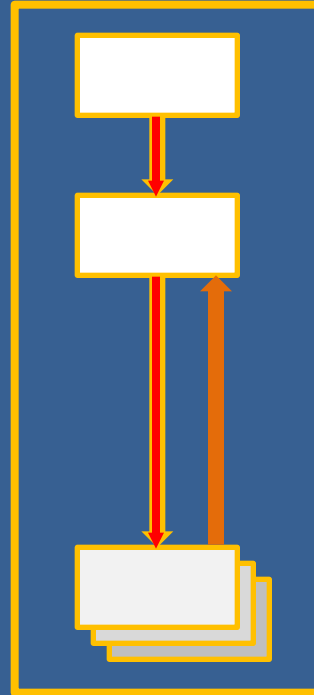
Government(s)

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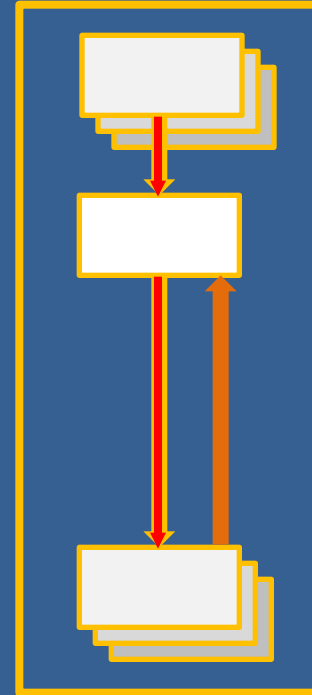
'National Translator'

Supplier

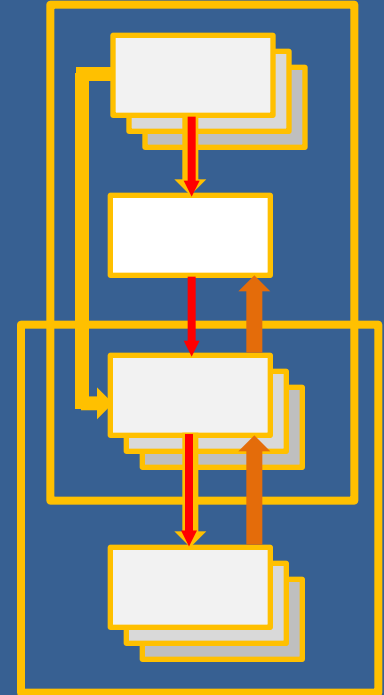
National



Regional



Global



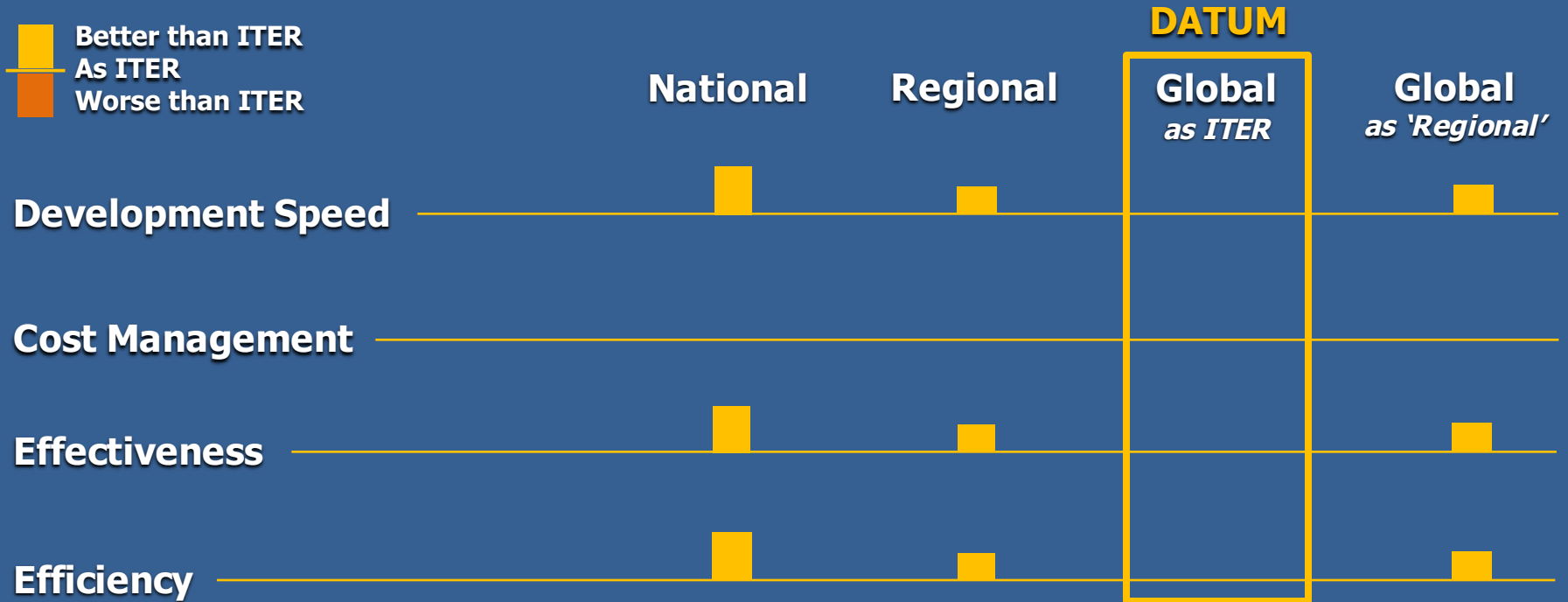
ITER Governance

- The 7 ITER Members make cash and in-kind contributions (90%) to the ITER Project. They have established Domestic Agencies to handle the contracts to industry.
- The ITER Organization Central Team manages the ITER Project in close collaboration with the 7 Domestic Agencies.
- The ITER Members share all intellectual Property generated by the Project.



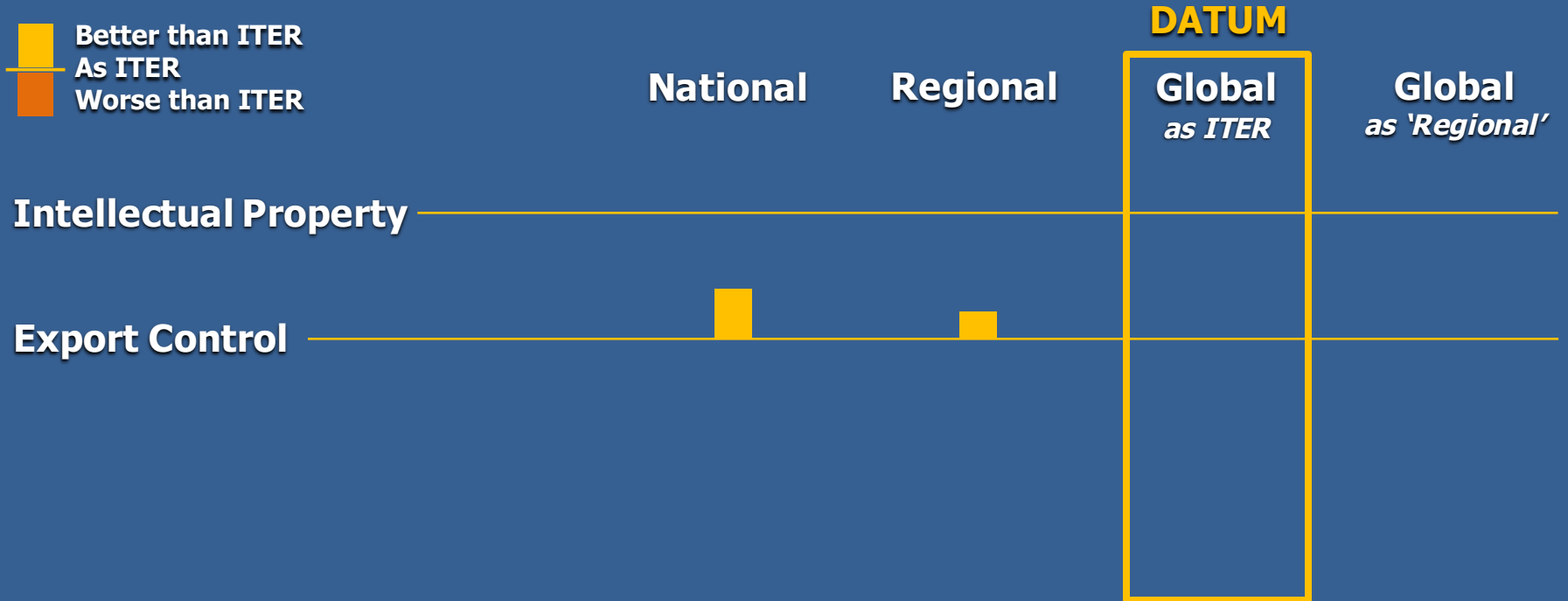
Qualitative Comparison

of complex First-of-a-Kind Scientific Project Governance Models

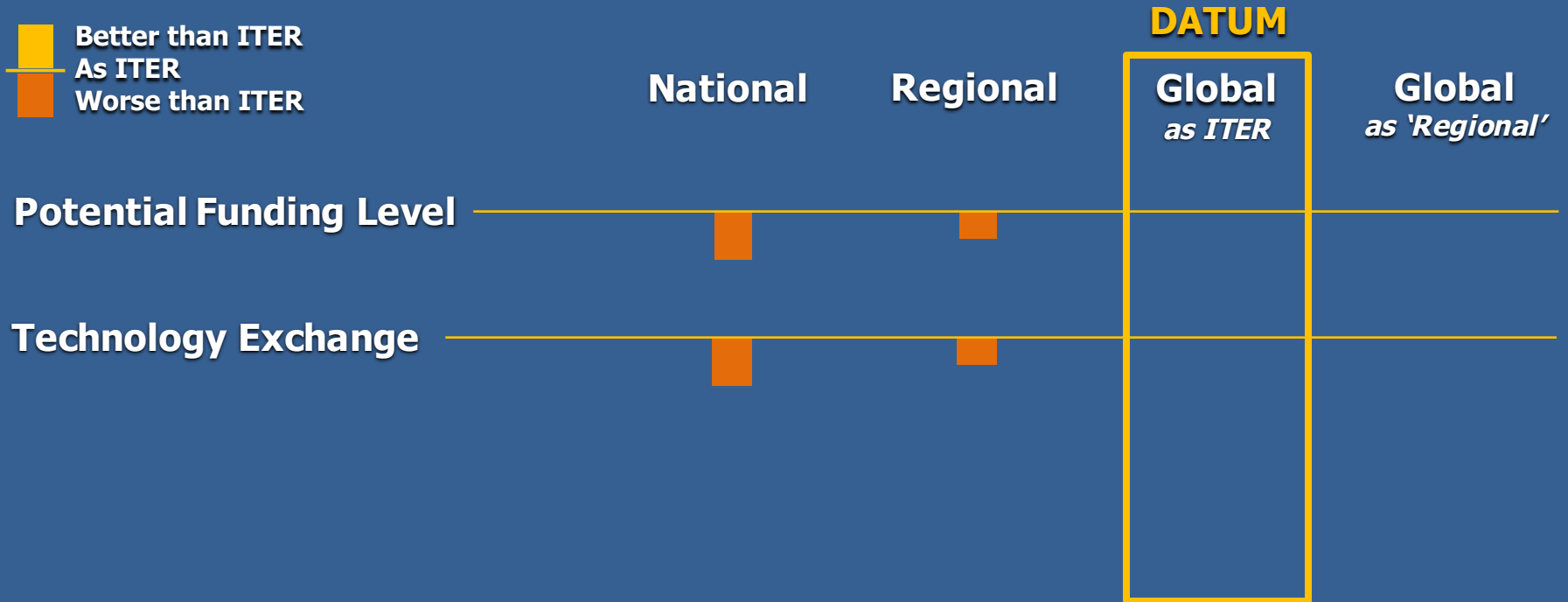


Qualitative Comparison

of complex First-of-a-Kind Scientific Project Governance Models



Qualitative Comparison of complex First-of-a-Kind Scientific Project Governance Models



ITER

Key factors influencing its success

The ITER Agreement is an increasingly successful example of international collaboration for a complex and unique first of a kind project.

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ITER

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- ❑ This approach — 90% of Member funding as "in-kind" components — is unique.

ITER

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- ❑ This approach — 90% of Member funding as "in-kind" components — is unique.**
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- ❑ Already the fact that the negotiations on the cooperation have led to the existence of the ITER Agreement and its implementation is an example of its success.**
- ❑ A big advantage is the idea of 'juste retour'**
- ❑ This approach — 90% of Member funding as "in-kind" components — is unique.**
- ❑ Managed poorly, for a project of extraordinary complexity, this could be a recipe for failure.**
- ❑ Managed successfully, with strong project management, systems engineering, risk management, etc., this approach is a recipe for mutual benefit**

An aerial, wide-angle photograph of the ITER construction site. The image shows a large, circular building under construction, surrounded by various industrial structures and cranes. A large banner is visible on the left side of the image, featuring the ITER logo and the text "EMPOWER THE POWER OF THE SUN TO EARTH". The background shows a hilly landscape under a clear blue sky. The text "THANK YOU!" is overlaid in large, white, bold letters across the center of the image.

THANK YOU!

www.iter.org