

Bridge

European & Chinese Knowledge Exchange on Grids
Future Challenges and Priorities

Lyon – November 27, 2008

Gilbert Kalb, Fraunhofer-Gesellschaft

Bridge Perspectives

The Caravan passes on to the Cloud



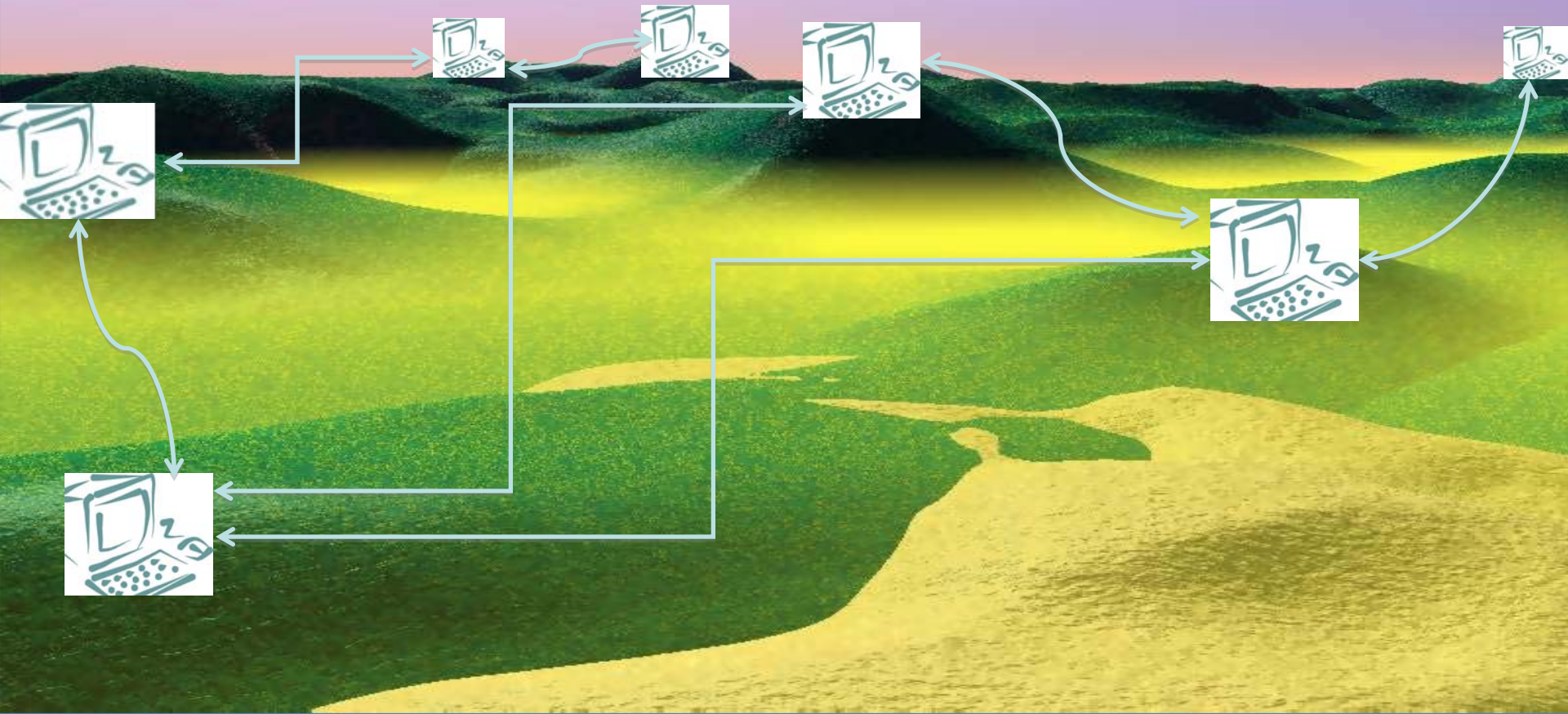
Bridge Perspectives

There is a place for distributed computing



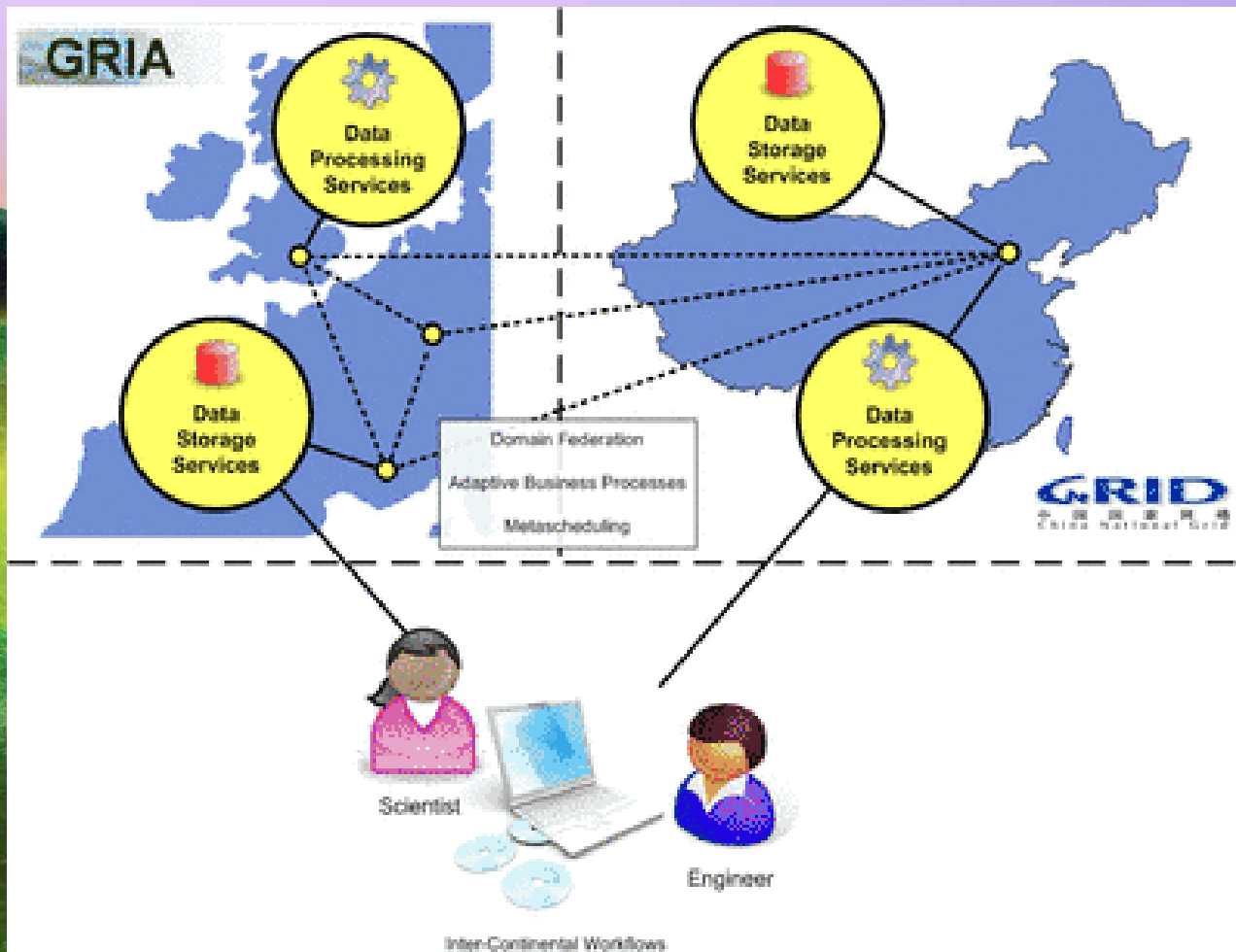
Bridge Perspectives

There is a place for distributed computing

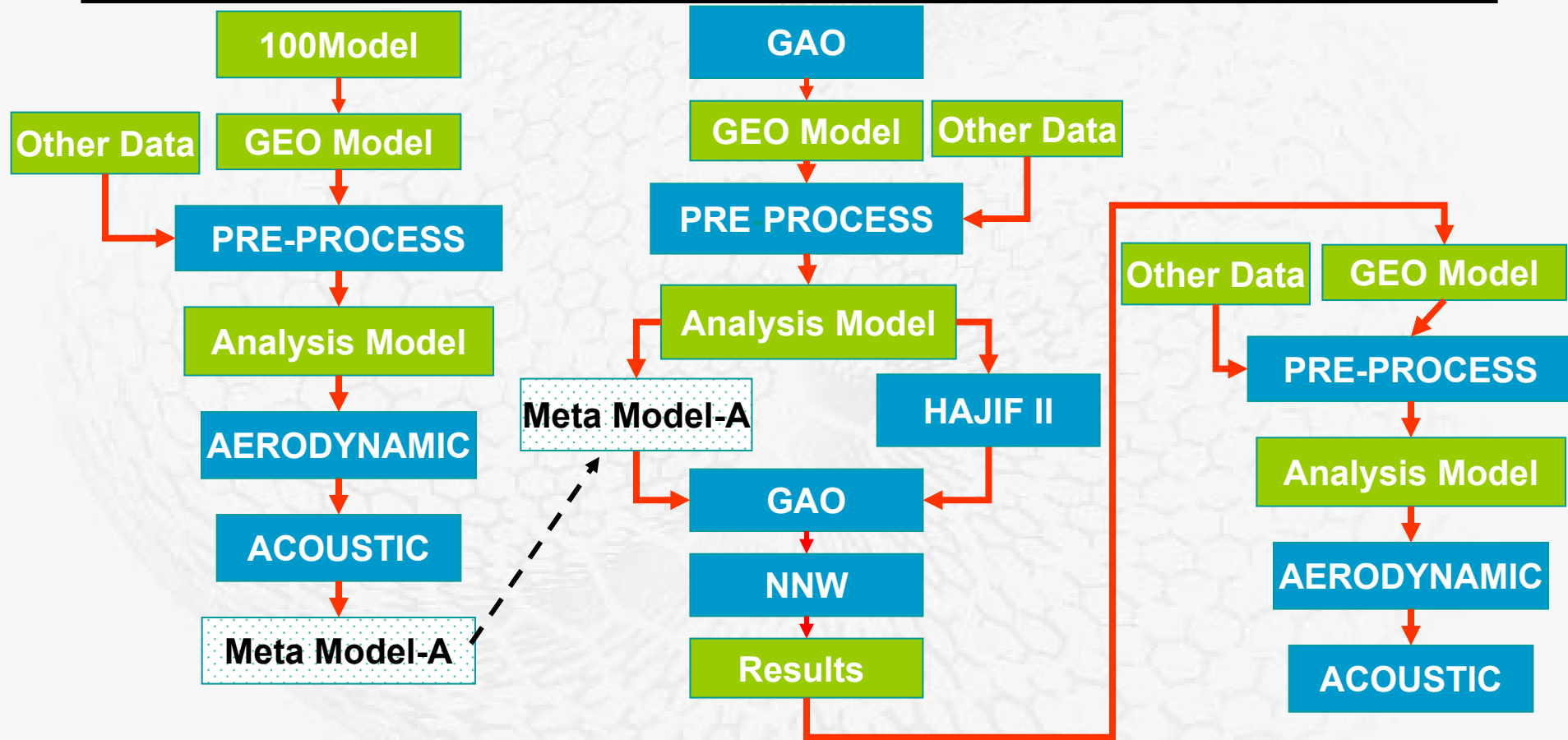


Bridge Perspectives

There is a space for distributed computing



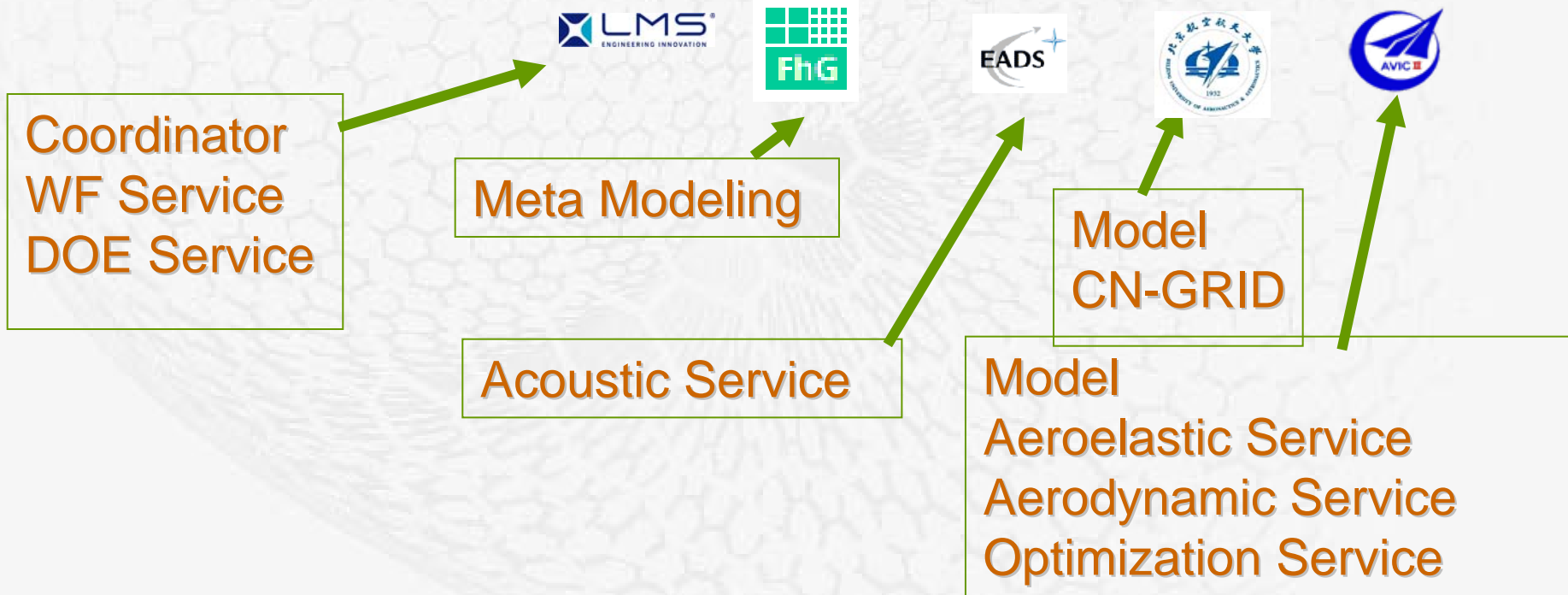
□ Bridge Optimization Business Process



Bridge Optimization Business Process

Aviation partners & major roles

Participant id:	LMS	SCAI	EADS	Beihang University	AVIC-II
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Bridge Perspectives

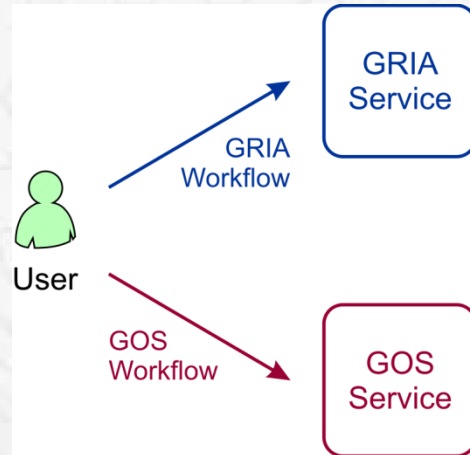
The future of internet collaboration and interoperation

- **Service oriented infrastructure for global networks and processes**
 - Management topologies
 - Business processes
 - Security policies
- **Distributed workflows**
 - Policy Management
 - Initiating trust relationships
 - Managing security
 - Maintaining access rights
 - Resource and capacity management
 - Transfer and storage

Bridge Infrastructure

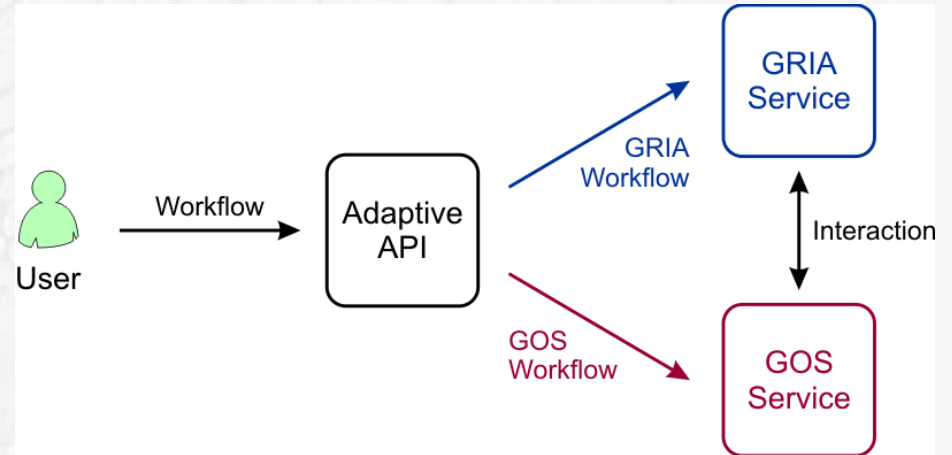
Working with GRIA/GOS services

Without Adaptive API



- Each service requires a workflow
- No service interaction

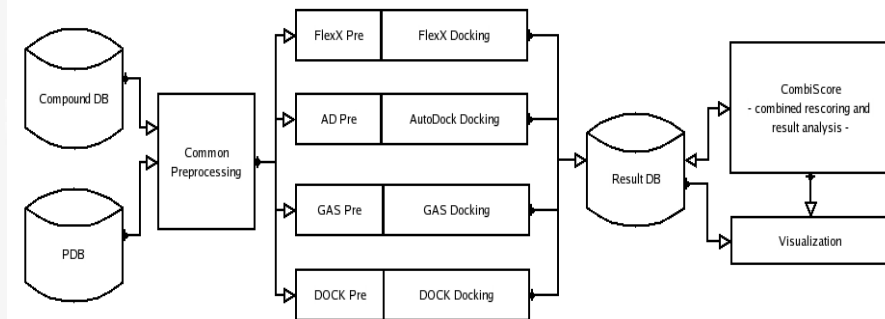
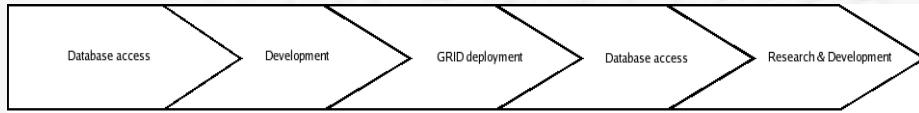
With Adaptive API



- One workflow for both services
- Services can interact

Bridge Application Scenarios

Drug Design Example: Pharma DockFlow

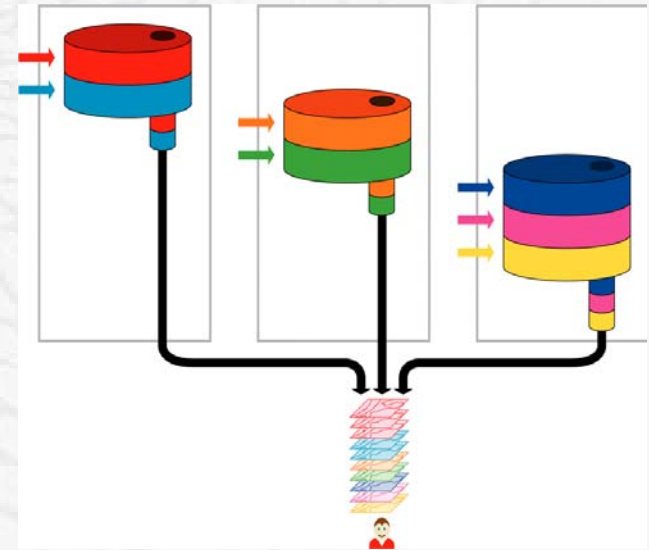
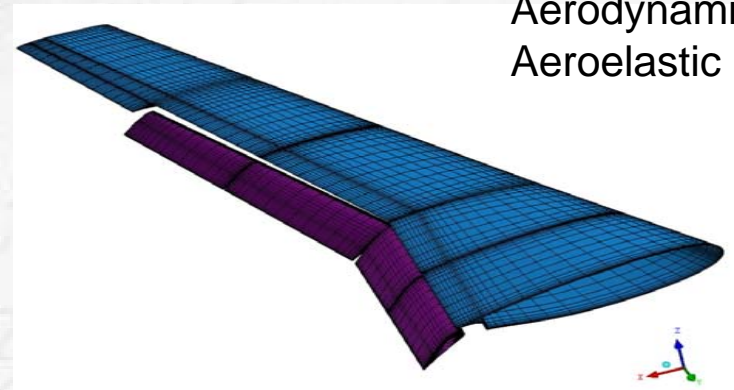


Meteorology

Example:

Distributed processing on distributed data,
across the two GRID middleware
(GRIA1, GOS2)

Acoustic
Aerodynamic
Aeroelastic



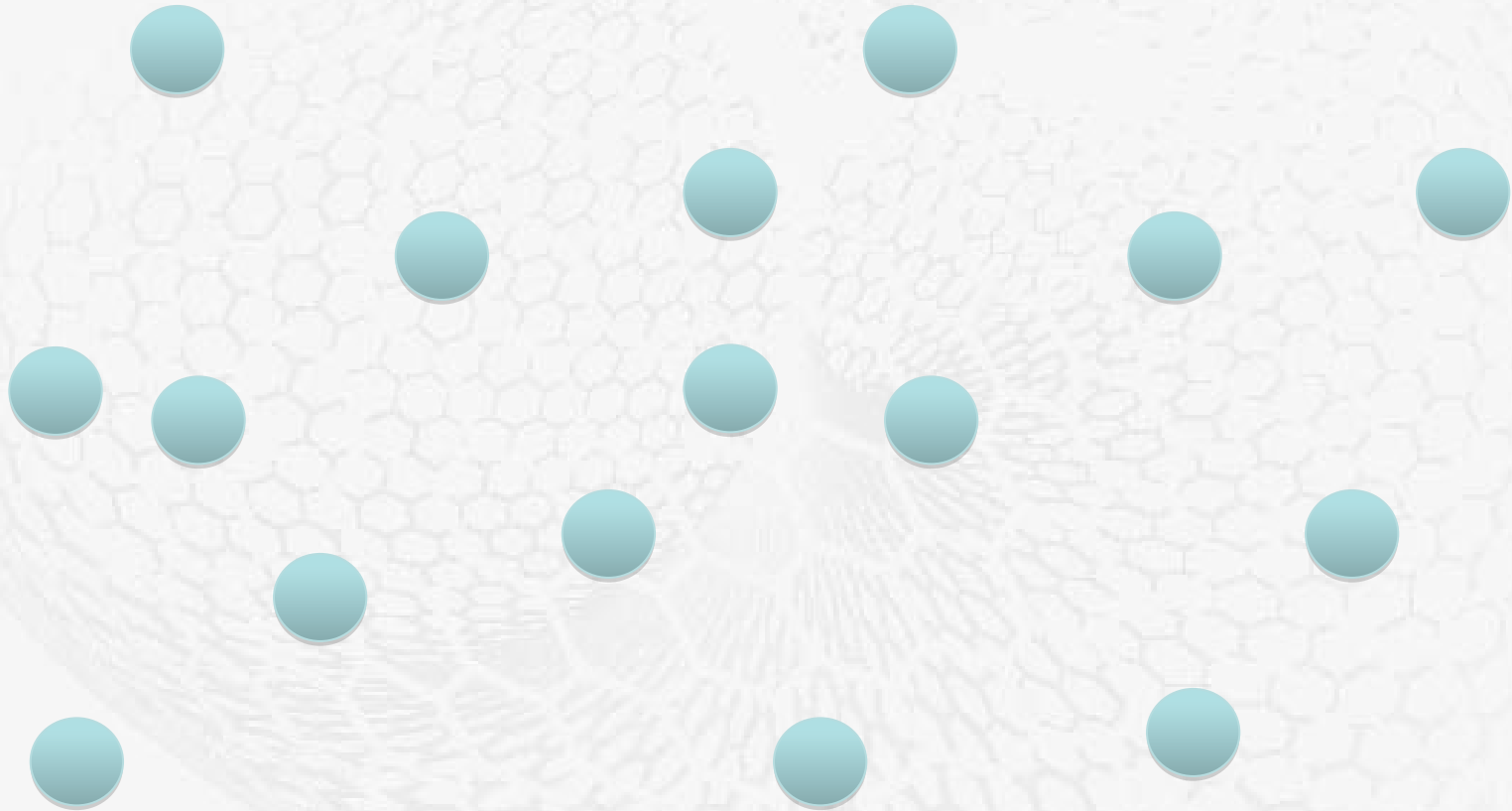
Bridge - Common issues of the applications

- **Business to business services**

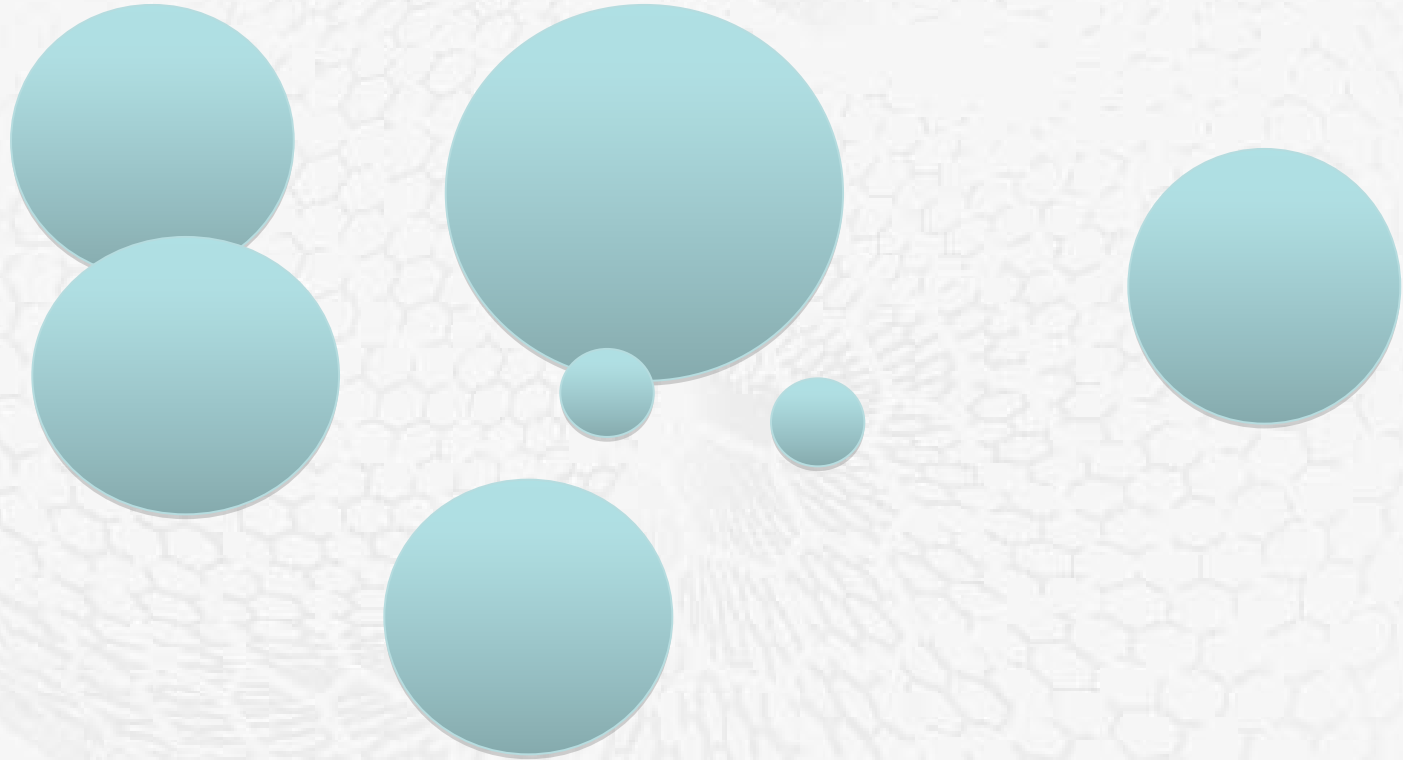
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- **Intensive cooperation**
 - **Protection of IPR**
 - **Full control of service provision**

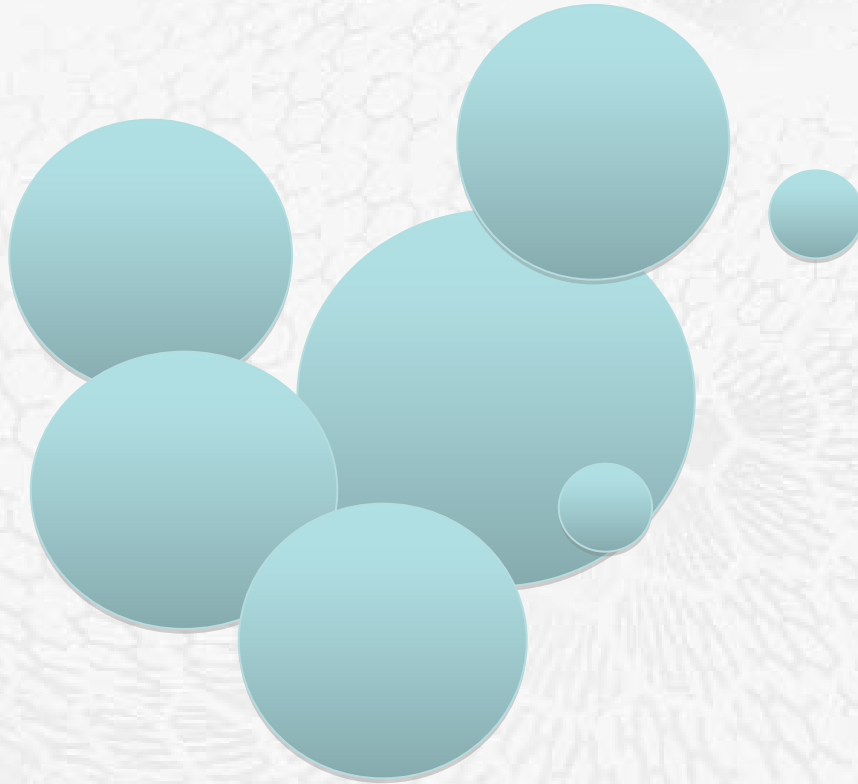
Bridge experience in international cooperation: Setting up a consortium



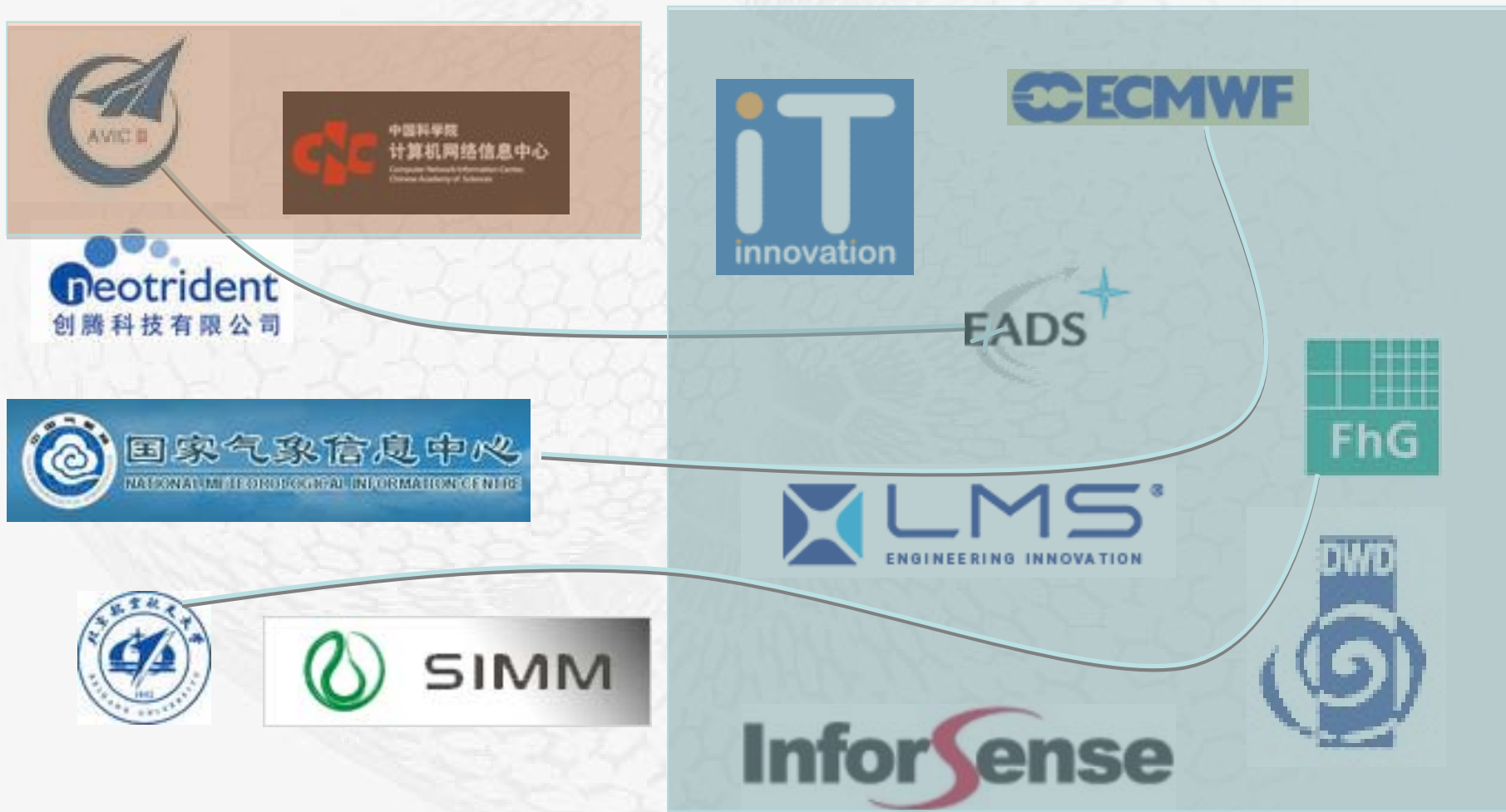
Bridge experience in international cooperation: Setting up a consortium



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Bridge experience in international cooperation: Setting up a consortium

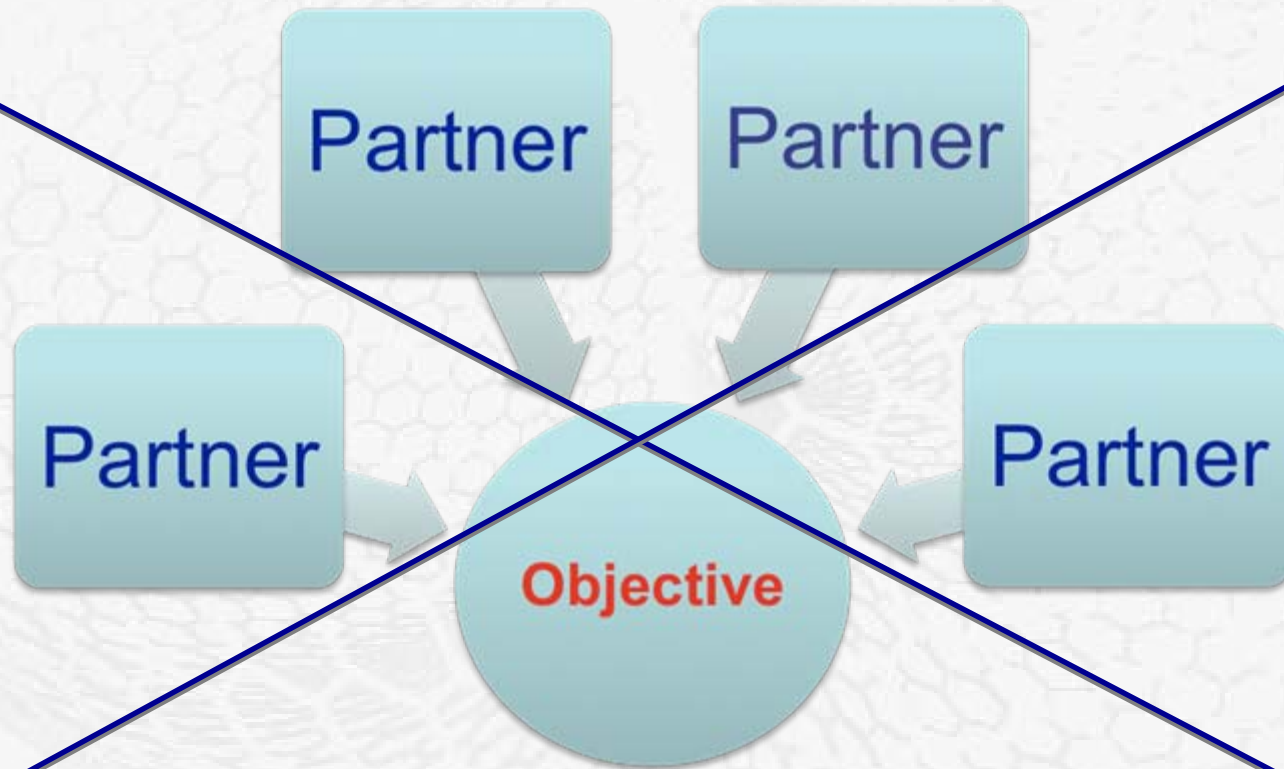


Bridge ingredients for success

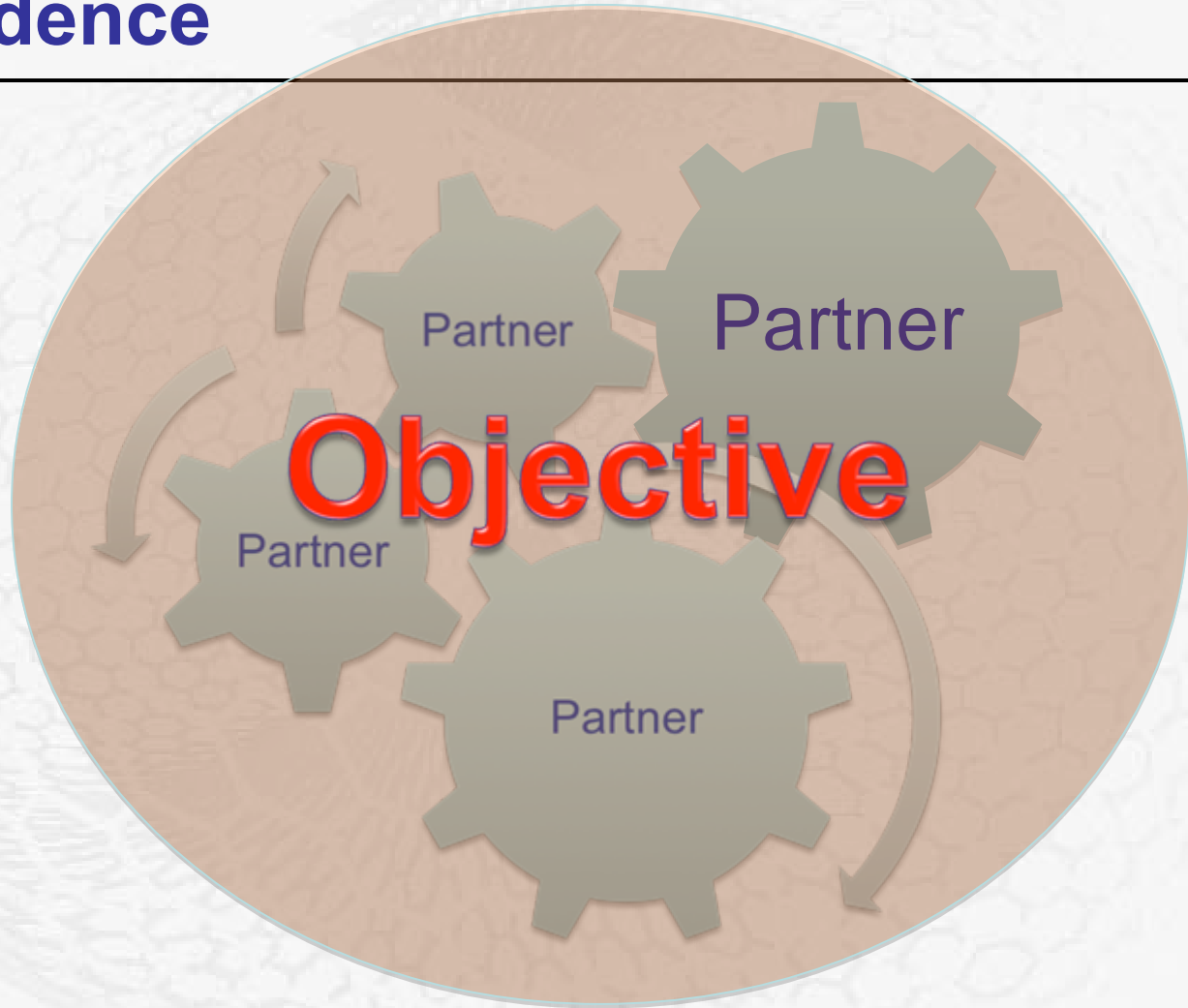


- Based on existing relations
- Contacts with some Chinese partners before the project started
- **Colaboration towards a shared objective**

Bridge experience in international cooperation: Independent work



Bridge experience in international cooperation: Interdependence



Doing
some real
research

Bridge ingredients for success



- Based on existing projects
- Experience with different Grid platforms.
- Contacts with Europe/China partners before the project started
- Colaboration towards a shared objective
- **Joint responsibilities in management**

Bridge ingredients for success



- Based on existing projects
- Experience with different Grid platforms.
- Existing Contacts with some Chinese partners before the project started
- Colaboration towards a shared objective
- Joint responsibilities in management
- **Commercial interest**



Bridge future options

- Exploitation of results for partners
- Improving the infrastructure
 - Interoperability with other platforms
- Deploying more services
- Working on problems in other domains
 - Civil Engineering
 - **B2B services**
 - **Intensive cooperation**
 - **Protection of IPR**
 - **Full control of service provision**
 - Vehicle design
 - Financing

Thank you!

