PERASPERA 3rd Workshop Presentation

ERGO: Possibilities in terrestrial applications

ERGO

HORIZON 2020

AIRBUS DEFENCE & SPACE

UNIVERSITÉ Grenoble Alpes

Universität Basel

Ellidiss Technologies

KING'S College LONDON

SCISYS

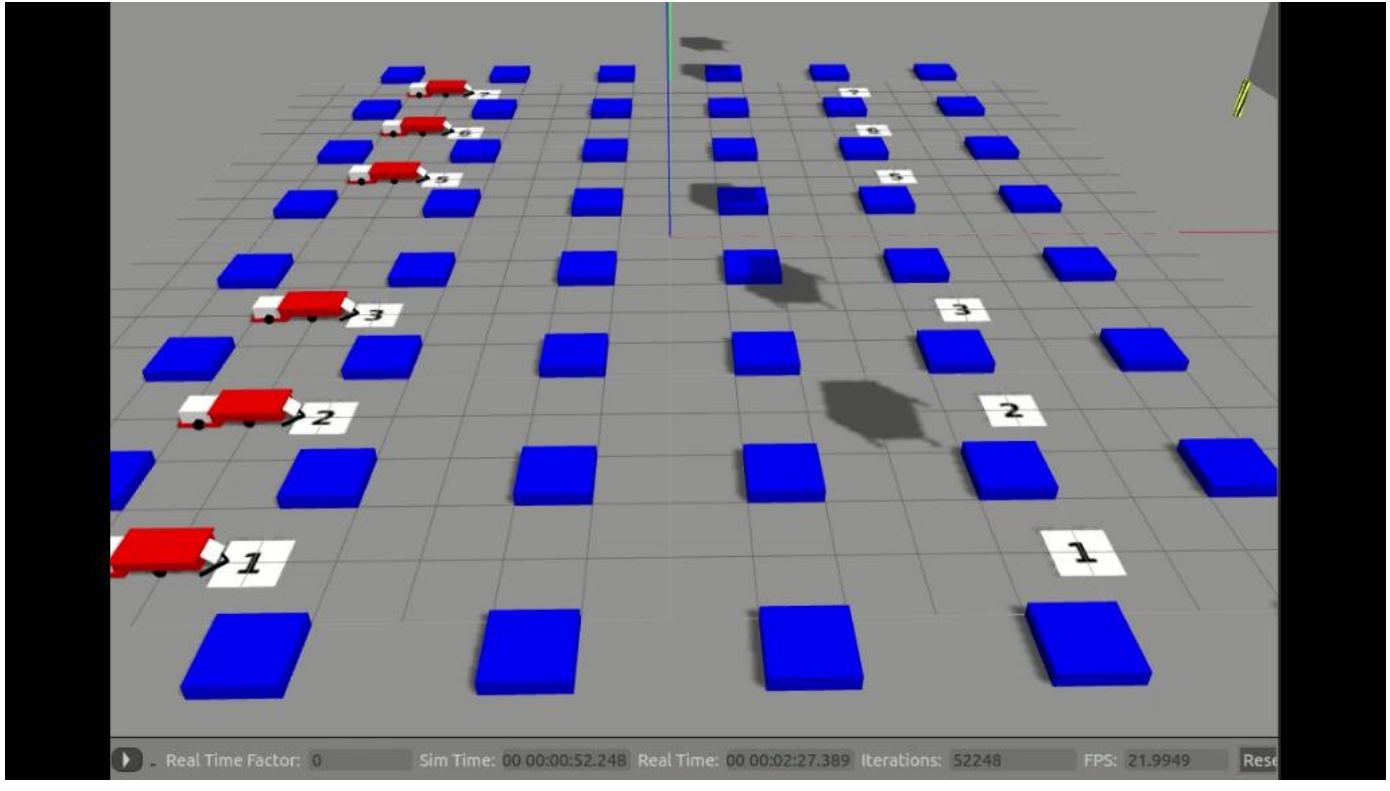
gmv INNOVATING SOLUTIONS

ERGO – Impact on future terrestrial robots

- There is a high potential in spin-off activities: components of the framework can be easily tailored to future terrestrial applications
- Autonomous robotic solutions are currently considered as the ideal solution for 3D (dull, difficult and dangerous) tasks, such as:
  - Oil & gas isolated processing plants
  - Nuclear: decommissioning activities in power plants
  - Deep water exploration
  - Vessel inspection
  - Maritime search and rescue applications
  - UAV,s for electricity distribution
  - Agricultural robots
  - Mining

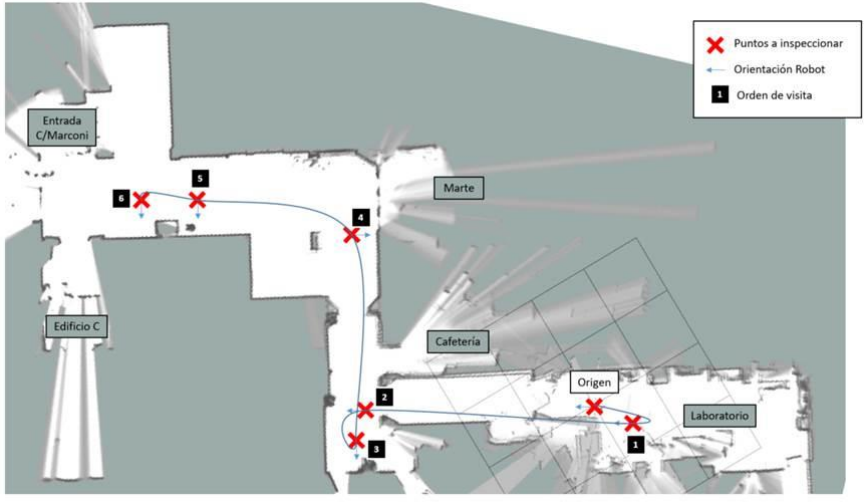
ERGO – Terrestrial usage examples (I)

Logistic application. Internal logistics



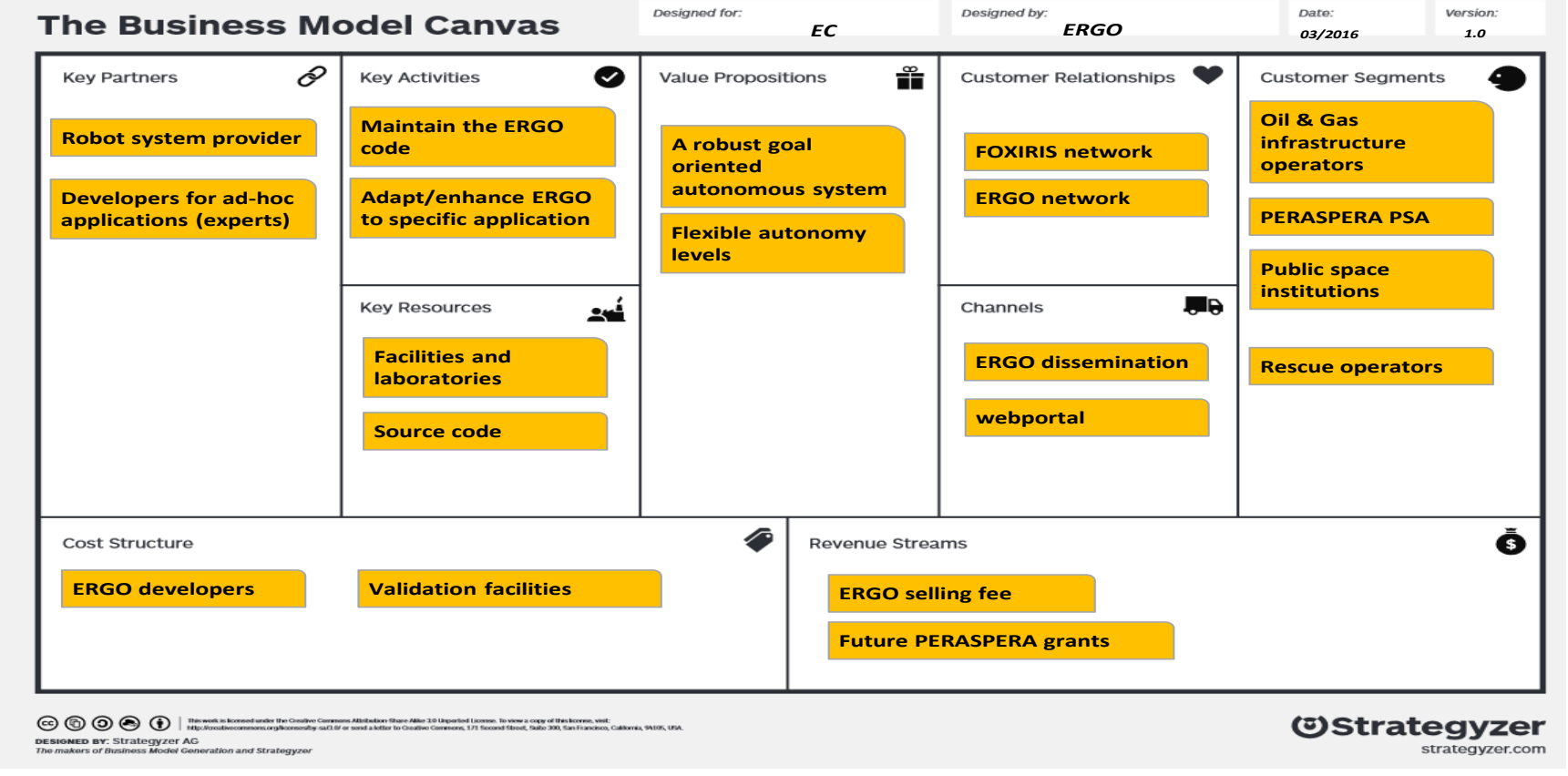
ERGO

ERGO – Terrestrial usage examples (II)



ERGO

Business Model



The Business Model Canvas

Designed for: EC | Designed by: ERGO | Date: 03/2016 | Version: 1.0

Key Partners
- Robot system provider
- Developers for ad-hoc applications (experts)

Key Activities
- Maintain the ERGO code
- Adapt/enhance ERGO to specific application

Key Resources
- Facilities and laboratories
- Source code

Value Propositions
- A robust goal oriented autonomous system
- Flexible autonomy levels

Customer Relationships
- FOXIRIS network
- ERGO network

Channels
- ERGO dissemination
- webportal

Customer Segments
- Oil & Gas infrastructure operators
- PERASPERA PSA
- Public space institutions
- Rescue operators

Cost Structure
- ERGO developers
- Validation facilities

Revenue Streams
- ERGO selling fee
- Future PERASPERA grants

ERGO

Conclusions

ERGO provides a set of components that allow a dual-use in both terrestrial and space applications. In particular, these tools can reduce:

- **Costs**: since there is a reduction of human resources involved.
- **Scientific return/Responsiveness**: Dynamic re-planning eliminates the need of having a human in the loop, making a constant assessment of status and elaborating a complex set of telecommands to adapt to a new situation. This allows for a much better response to unexpected events and hazardous situations.
- **Timeliness**: On-board planning can choose the optimal sequence of actions based on the information available on-board, so that only the critical information will be downlinked
- **Reliability**: FDIR tools, combined with a model-driven architecture, are based on a new paradigm that we think that will be necessary for future complex, safety critical mission

www.gmv.com

THANK YOU

jocon@gmv.com

gmv BLOG