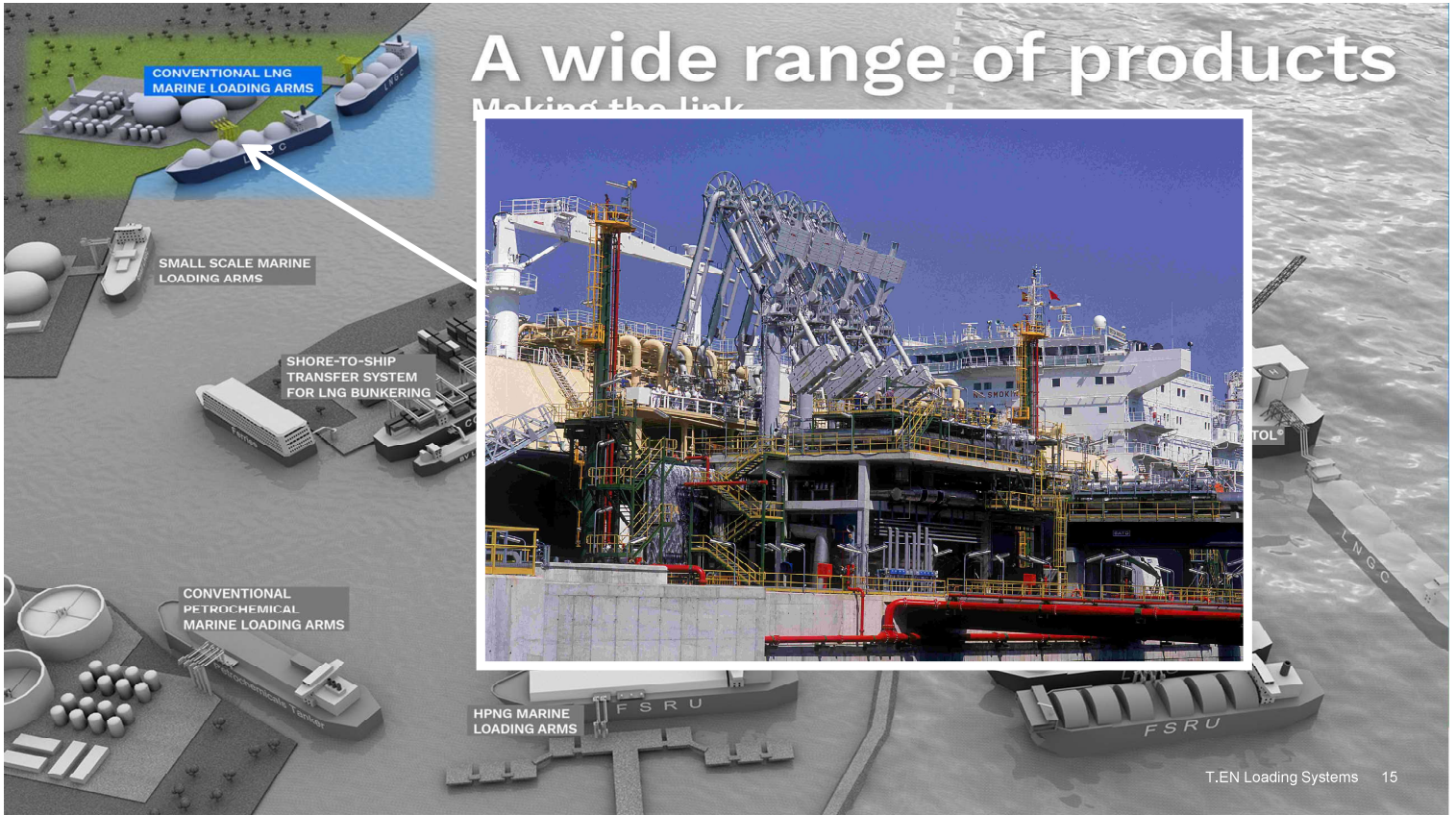


# A wide range of products

Making the link

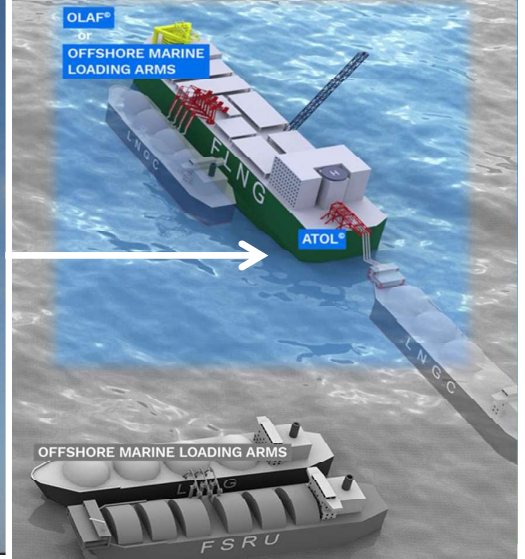


# A wide range of products

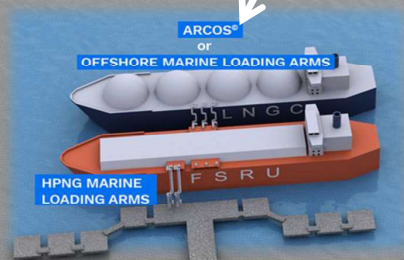
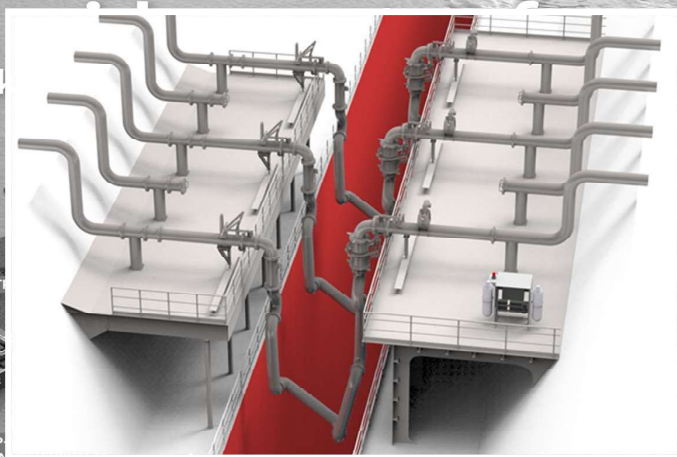
Making the link



# A wide range of products



# A wide range of products

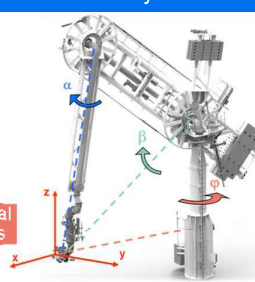


# 3

## Easy Drive & Auto Drive

### Conventional/articular control

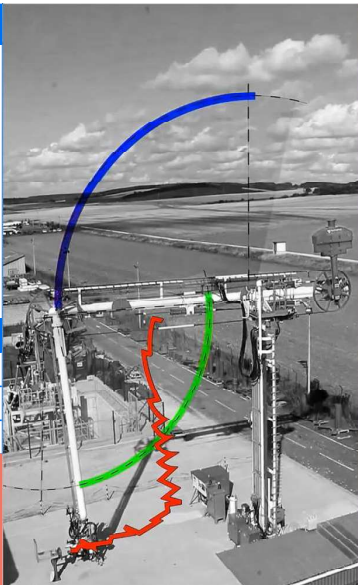
Conventional System




Spherical Motions

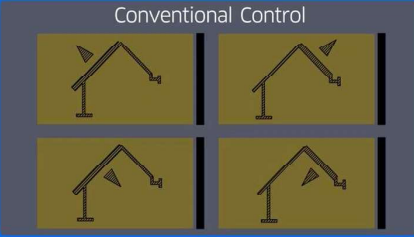
Operator command	Flange motion
Slewing $\phi$	$\rightarrow y + x$
Inboard arm luffing $\beta$	$\rightarrow x + z$
Outboard arm luffing $\alpha$	$\rightarrow x + z$

- Non intuitive command
  - ▶ trained operators
- Limited connection capabilities
  - ▶ sheltered areas




←
Conventional



Conventional Control



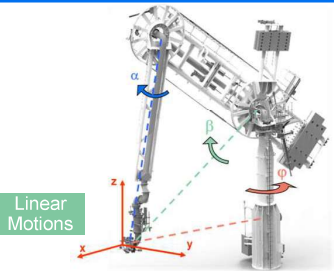
# Easy Drive control



Easy Drive Control



### EasyDrive System

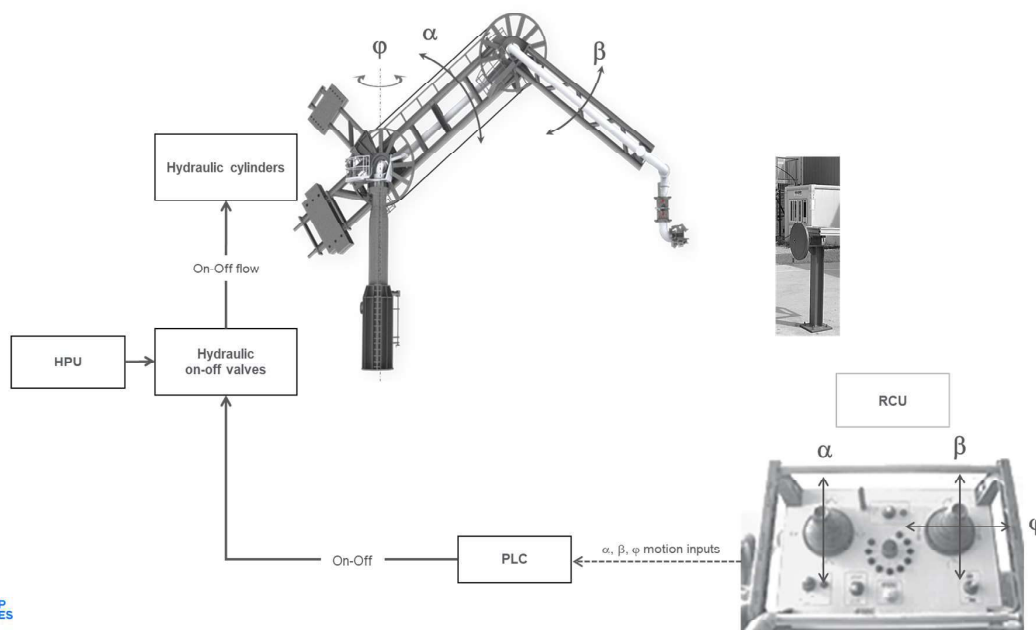


Linear Motions

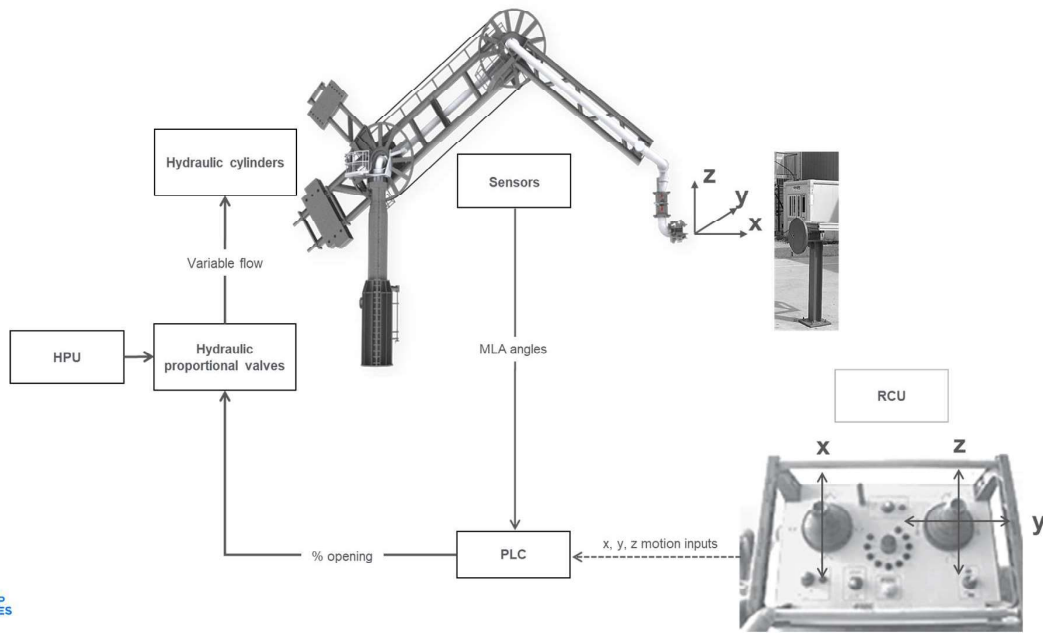
Operator	MLA motion
x	Combined $\phi + \beta + \alpha$
y	Combined $\phi + \beta + \alpha$
z	Combined $\phi + \beta + \alpha$

- Intuitive command
  - ease mating operation
- Improved connection capabilities
  - more exposed areas

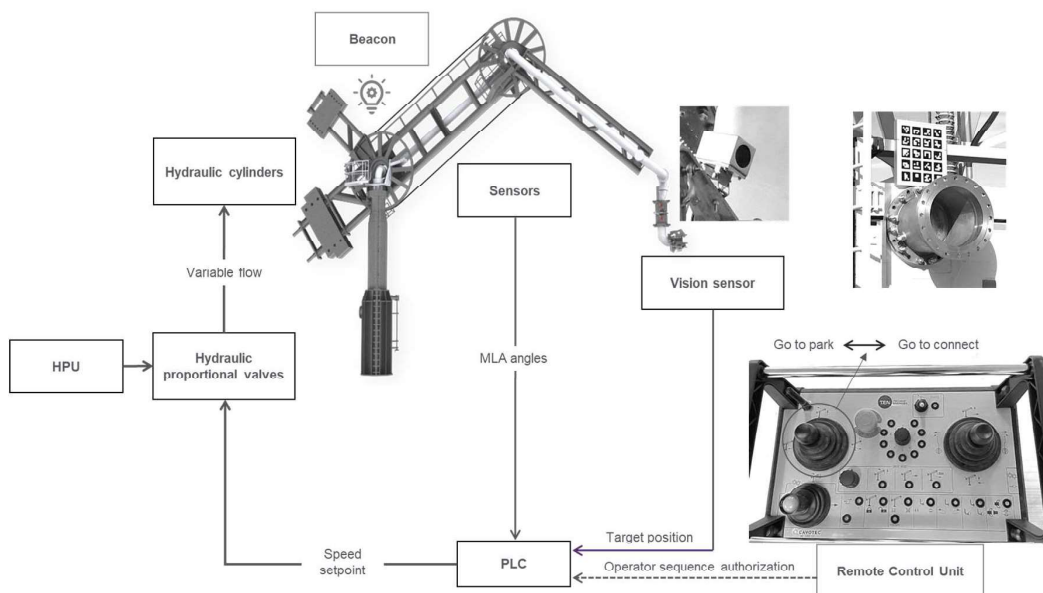
# Control architecture – Conventional/articular



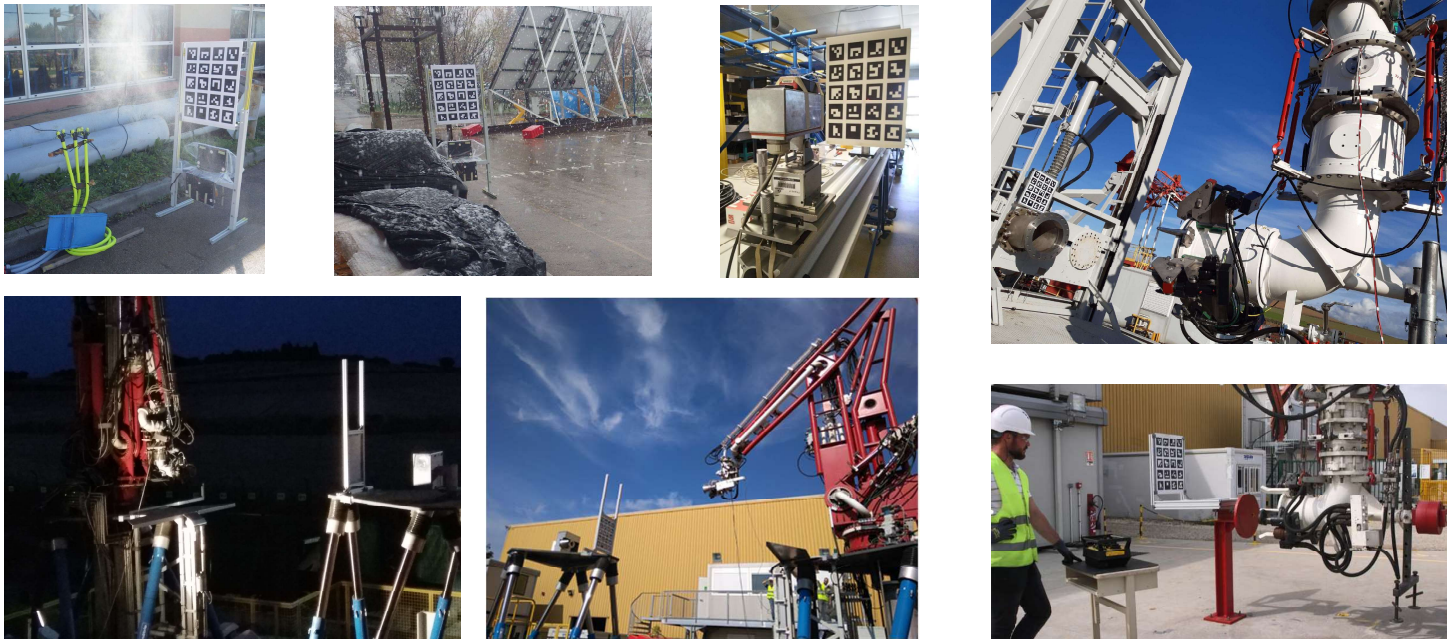
# Control architecture – Easy Drive



# Control architecture – Auto Drive



# Auto Drive – Vision sensor tests & integration



# Auto Drive – Vision sensor tests & integration

