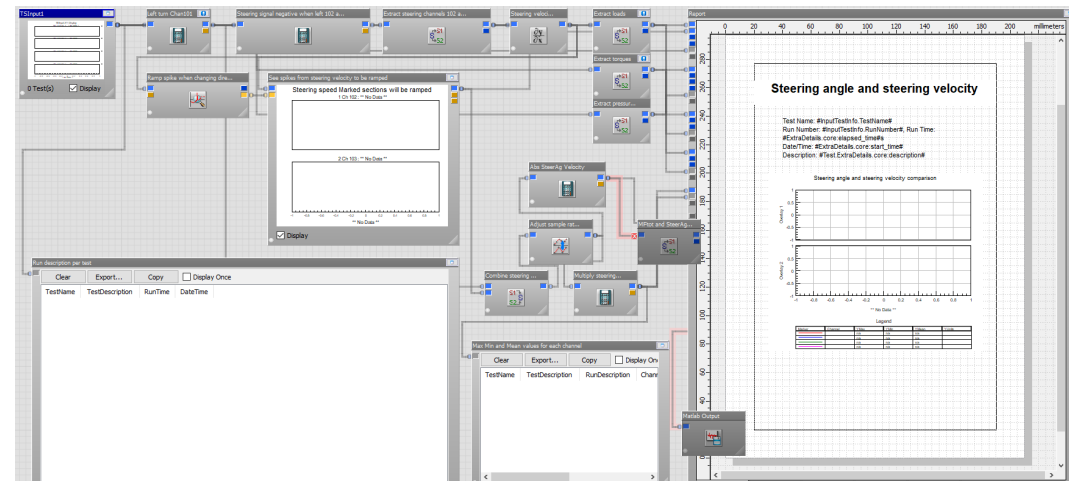


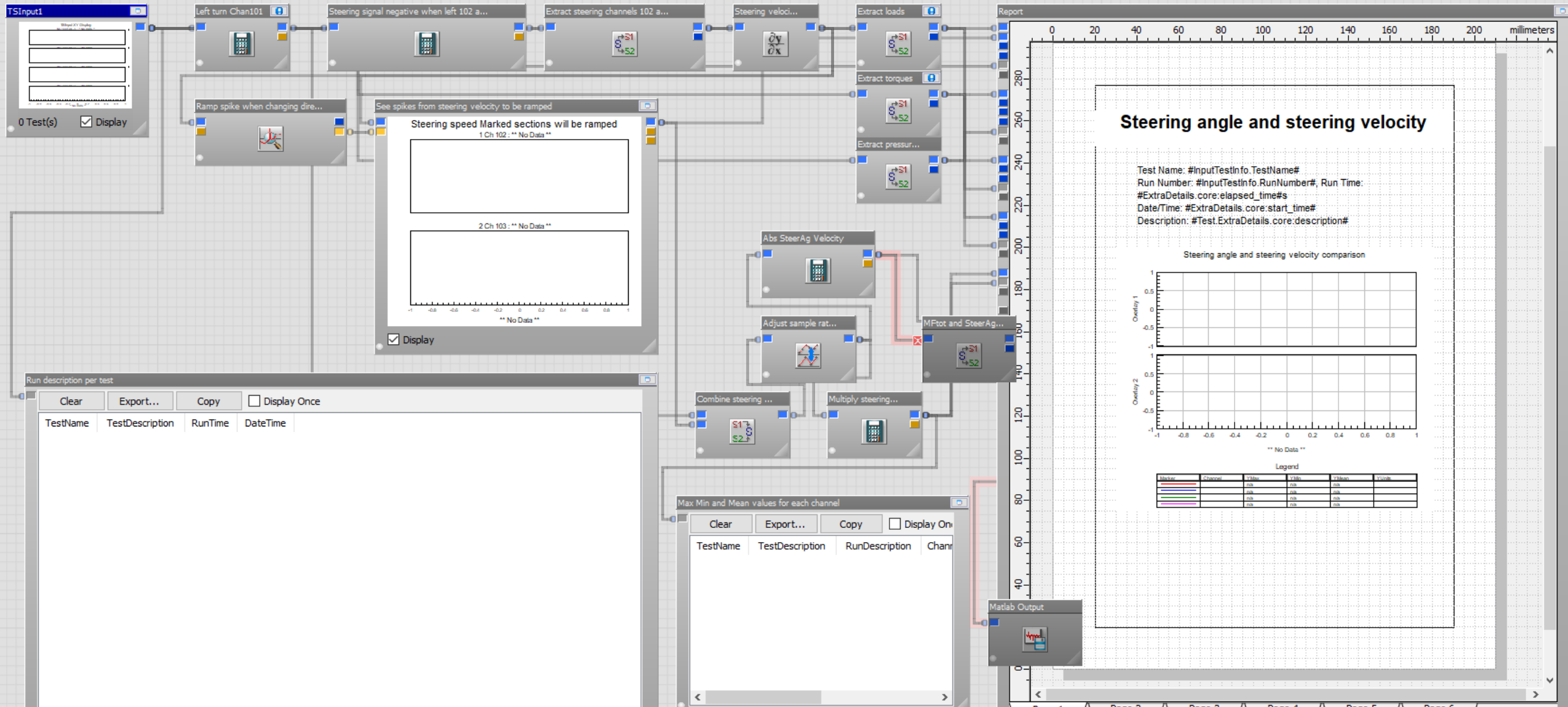
**Daniel Krainer**

**ABB**



**VOLVO**





nCODE/GLYPHWORKS

Academy

Research

Education

**Activity**      **Platform role**

PD research	Subject
Marketing / Student magnet	Enabler
Course development	Subject / material
Industry collaboration	Subject / Reference
.....	.....
.....	.....

**Activity**      **Platform role**

Courses	CDIO Enabler
Lab exercises	Subject
Thesis projects	Subject
X-program collab.	Enabler
Preparation for emplyoment	Catalyst
.....	.....
.....	.....

CDIO enabling platform



- Potentially a real buissines case
- Characterized by a comprehensive and promising product idea allowing multi-aspect interaction with the four domains (Academy/Research, Academy/Education, Industry/Education etc.)
- Could be organized as company, joint venture, open source project, in-house etc...

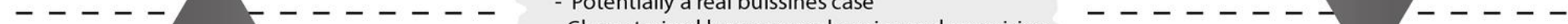
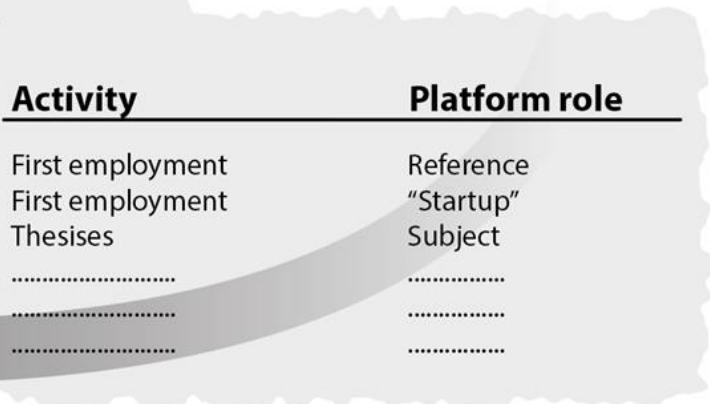
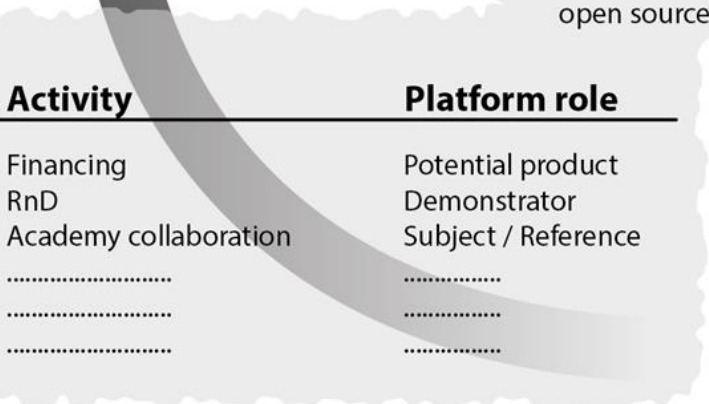
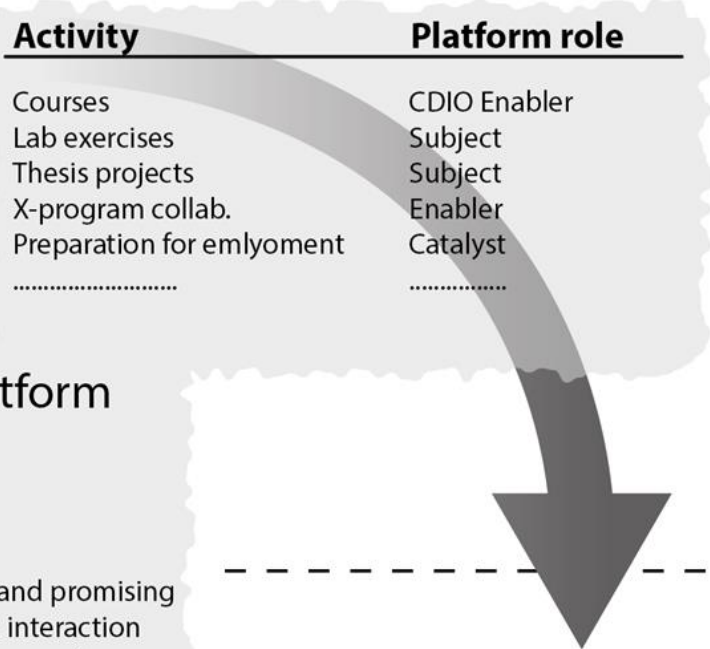
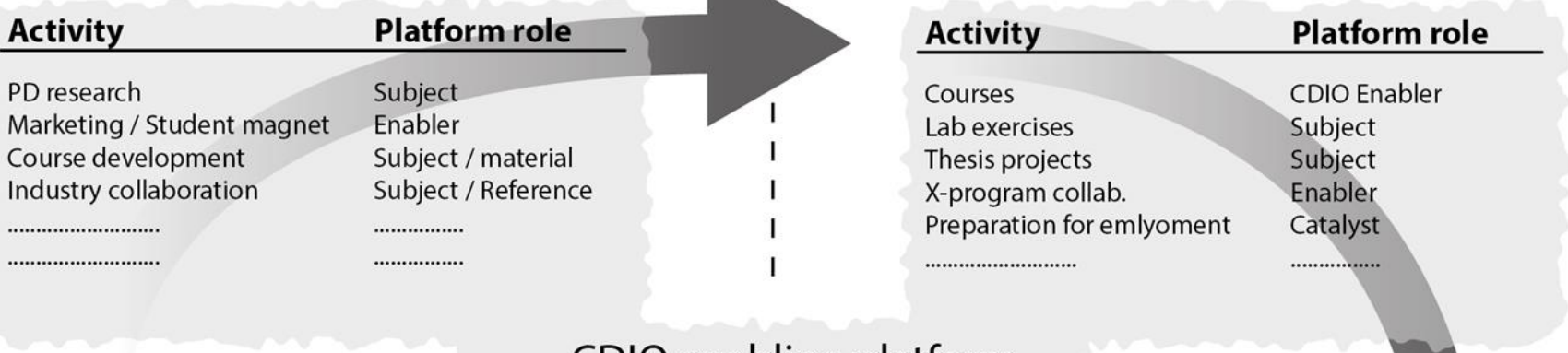
Industry / Community

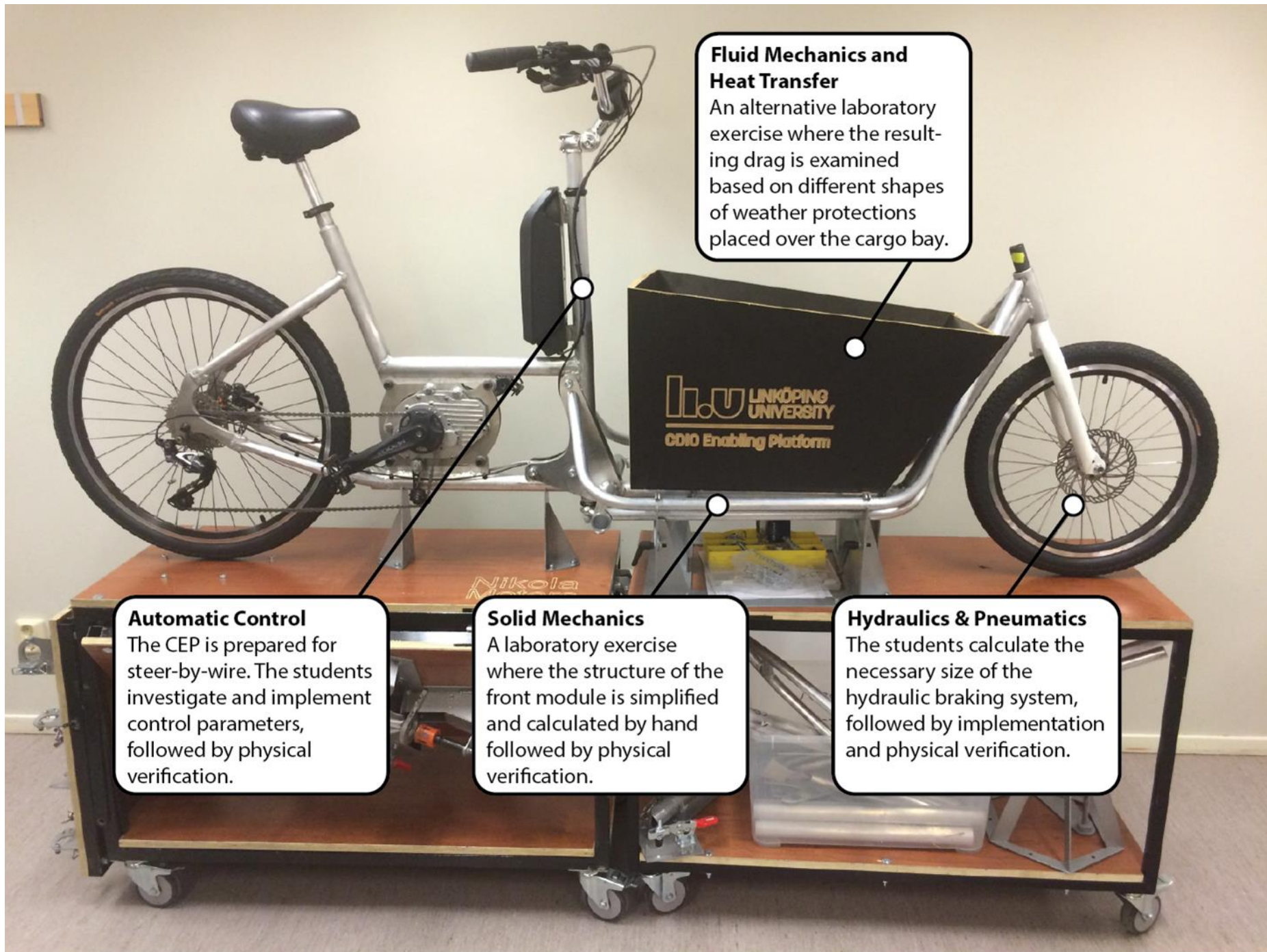
**Activity**      **Platform role**

Financing	Potential product
RnD	Demonstrator
Academy collaboration	Subject / Reference
.....	.....
.....	.....
.....	.....

**Activity**      **Platform role**

First employment	Reference
First employment	"Startup"
Thesises	Subject
.....	.....
.....	.....
.....	.....



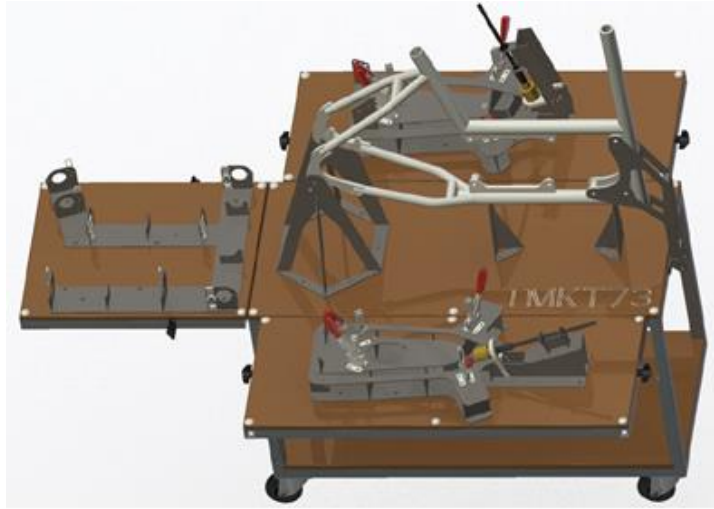


**Fluid Mechanics and Heat Transfer**  
An alternative laboratory exercise where the resulting drag is examined based on different shapes of weather protections placed over the cargo bay.

**Automatic Control**  
The CEP is prepared for steer-by-wire. The students investigate and implement control parameters, followed by physical verification.

**Solid Mechanics**  
A laboratory exercise where the structure of the front module is simplified and calculated by hand followed by physical verification.

**Hydraulics & Pneumatics**  
The students calculate the necessary size of the hydraulic braking system, followed by implementation and physical verification.



REAR MODULE  
RnD by Nikola Motors  
Main interface set by NM



FRONT MODULE  
RnD by sub-contractor  
General req. set by NM

