

Agenda

1 Introducing VDL

2 Why big science

3 How to get involved

4 discussion



VDL Groep



- Established in 19 countries
- > 100 operating companies
- > 17,000 employees, privately owned
- Turnover > €6 billion (2018)

Sub contracting

- mechatronic systems
- module assembly
- part and sheet metal
- surface treatments
- plastic processing
- other specialties



Bus group

- touring cars
- public transport bus
- mini and midi busses
- chassis modules
- second hand trade

Finished products

- medical equipment
- process installations
- consumer products
- production automation
- various products
- packaging equipment

VDL Nedcar Car assembly

- MINI
 - Hatchback
 - Cabrio
 - Countryman
- BMW
 - X1

Enabling Technologies Group



















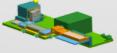






















VDL ETG Locations





VDL ETG Market segments

high-end contract manufacturing



Semiconductor Capital Equipment



Analytical Equipment



Medical Equipment



Science & Technology

- Accelerators & FELs
- Instruments for astronomy
- Satellites (communication, earth observation)



Ecosystem VDL ETG

Suppliers, Research, Competitors, Engineering, and Customers





Innovation power is key - how does VDL address?

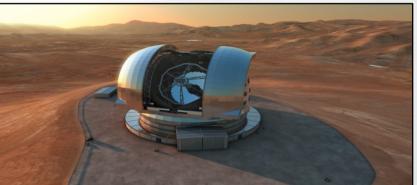
- Tomorrow's multinationals are founded today
- Innovation speed / power increases exponentially
- Market-creating innovation in Europe is lagging, applied research is under pressure
- Availability of (high quality) manpower is a limiting factor for our growth
- Enable the multinationals of tomorrow
- Create our own (international) innovation ecosystem

Only via networks we stay competitive (= innovative) NOW and in the future



Cooperation – an innovative support structure





E-ELT telescope

Co-development and prototyping by ESO, TNO, NOVA, VDL, and partners









Why VDL Science & Technology?

- Big science projects and related spin-offs have business potential, for example
- VDL strengthens its (technical) competences via S&T to better enable our mainstream businesses
- VDL continuously renews its sources of inspiration & innovation (applied research)
- Excellent marketing tool for the VDL Groep



So many big science projects...priority setting

- High spin-off potential (new / disruptive)
- Strengthening the VDL technology roadmap
- Good cultural fit
- Interesting business opportunity



priorities	pan-european	national	spin-off
accelerator	CERN	PSI, DESY	AVO, SL
astronomy	ESO	NOVA, ASTRON	technology, other projects
space	ESA	SSO, SRON, TNO	Synopta, cosine
energy	ITER	PSI, DIFFER	investigating



For discussion

- Large companies have critical size to invest and build (international) networks
- SMEs link into these networks based on specialized skill sets
- For all involved identify and market your <u>unique</u> competence



- How to get involved with a targeted Big Science project
 - Start small, very focused, look for showcases
 - Carefully select your (sub)projects, tap into the existing networks consortia
 - Watch out for proto typing only it is high risk (only)

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