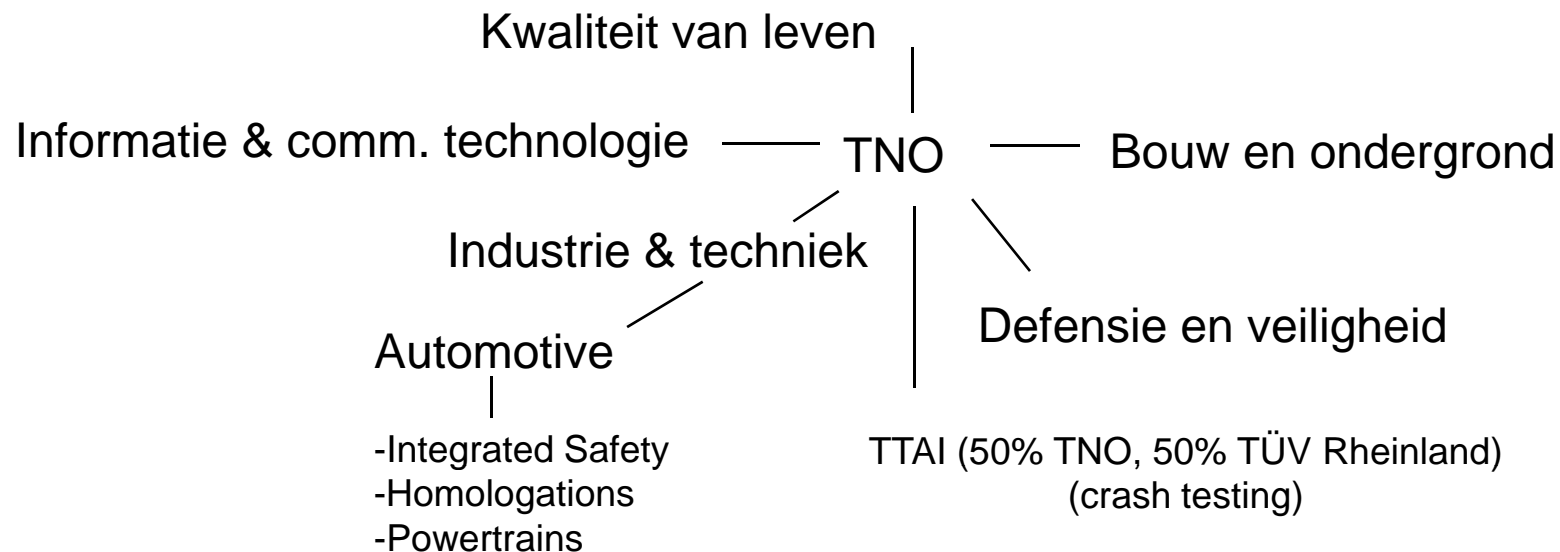


Organization



- Employees: TNO Automotive: 150 (4500 TNO total); TTAI 37
- Offices: Global (EU, USA, Asia, China) and Automotive headquarters in Helmond
- Activities and products: Innovation, Integration, Homologation and Testing of components and vehicles
- Markets TNO Automotive & TTAI: Automotive, Maritime, Aviation, Off-road (OEM's, TIER 1's, Public, Governments)
- Goal: Stimulate business by innovation / linking (university) science to applications / Support product development from design to homologation
- Turnover: >10MLY/ Year

Strengths



- Leading organization acting on various fields of knowledge > synergy
- High level knowledge and (unique) test facilities
- Independent
- 40 years Automotive experience

TNO Automotive & TTAI competences and track record related to EV's, HEV's, PHEV's and batteries:

Knowledge	Products	Test Facilities
<ul style="list-style-type: none">-Modeling and control<ul style="list-style-type: none">Inverters, engines, transmissions and batteriesEnergy managementActive & passive safety- System integration- Benchmarking- Homologation- Legislation (active role in development of procedures & legislation (partner in EU consortia))	<ul style="list-style-type: none">- E-Horizon- EPTO- E-range predictor- Electronic Variable Transmission- Simulation packages- Advice, consultancy	<p>Vehicles / Engines</p> <ul style="list-style-type: none">-Performance & emissions<ul style="list-style-type: none">-Climatic Altitude Chamber-Engine test stands-Chassis dyno-Reliability test-Functionality test-Crash testing <p>Components (batteries)</p> <ul style="list-style-type: none">-Conditioning-Climatic tests-Charge / Discharge-Abuse tests

- TNO & TTAI's target is to form an innovative expert centre in the area of EV's / HEV's and PHEV's, supported by new facilities

Chances for partners:

- Working with an international recognized institute, specialized in:
 - > Research & Development
 - > Testing
 - > Partnering complex projects
 - > Legislation
 - > Homologation
 - > Certifying