

A European perspective on vocational qualifications in the automotive sector



Ed Mahood, AMTEC Academy: Maintenance 2020, 22 March 2012



Where are we headed?

DEKRA (*Deutscher Kraftfahrzeug-Überwachungs-Verein e.V.*)

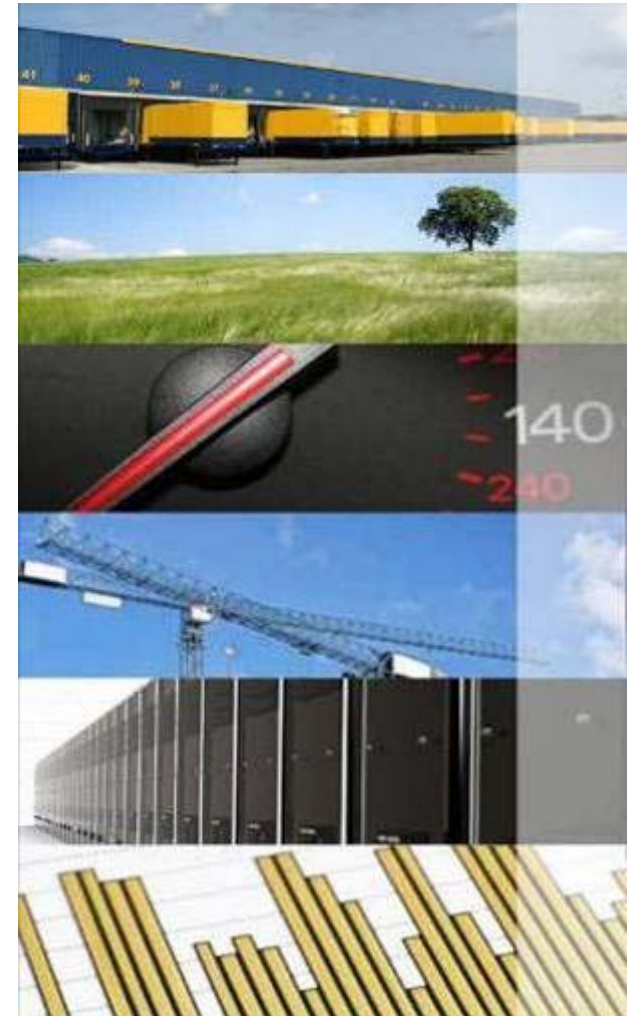
- Who we are
- What we do

A STEP into the future

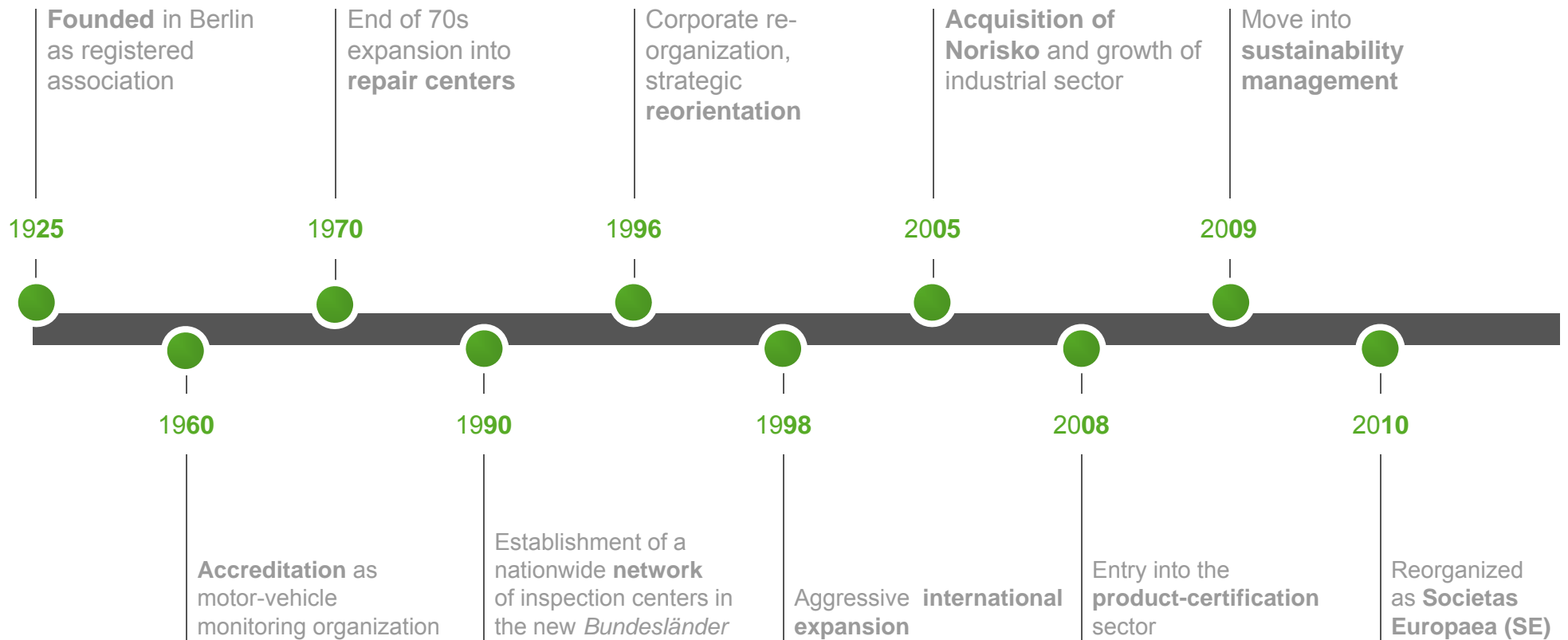
Back to the Old Country?

- The EU and European issues
- The German example
- Directions, tools and approaches
- What DEKRA is doing to help

Where do we go from here?



A company with tradition



3 Business units with 15 strategic service lines



AUTOMOTIVE

- Vehicle Testing
- Expertise
- Used Car Management
- Homologation
- Consulting
- Claims Services



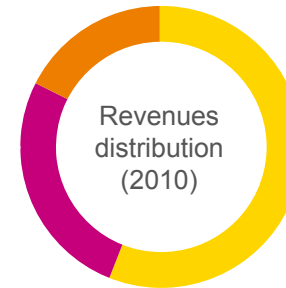
INDUSTRIAL

- Building and Facilities
- Machinery/Plant Safety
- HSE
- Energy/Process Industries
- Systems Certification
- Product Certification



PERSONNEL

- Qualification
- Temporary Work
- Out- and New placement



55.3%
DEKRA Automotive

26.6%
DEKRA Industrial

17.4%
DEKRA Personnel

International subsidiaries

● 28 countries

● 23 countries

● 10 countries



- Headquarters in Stuttgart
- Revenues > 1.8 billion €
- Over 25,000 employees (~40% outside Germany)

VET services portfolio

Full-service spectrum -
one source

Classroom/F2F
Blended learning
Distance learning, E-learning
Instructional films, LMS

B2A, B2B, B2C

More than 30 years
experience

Infrastructure
in Germany,
Europe and
overseas

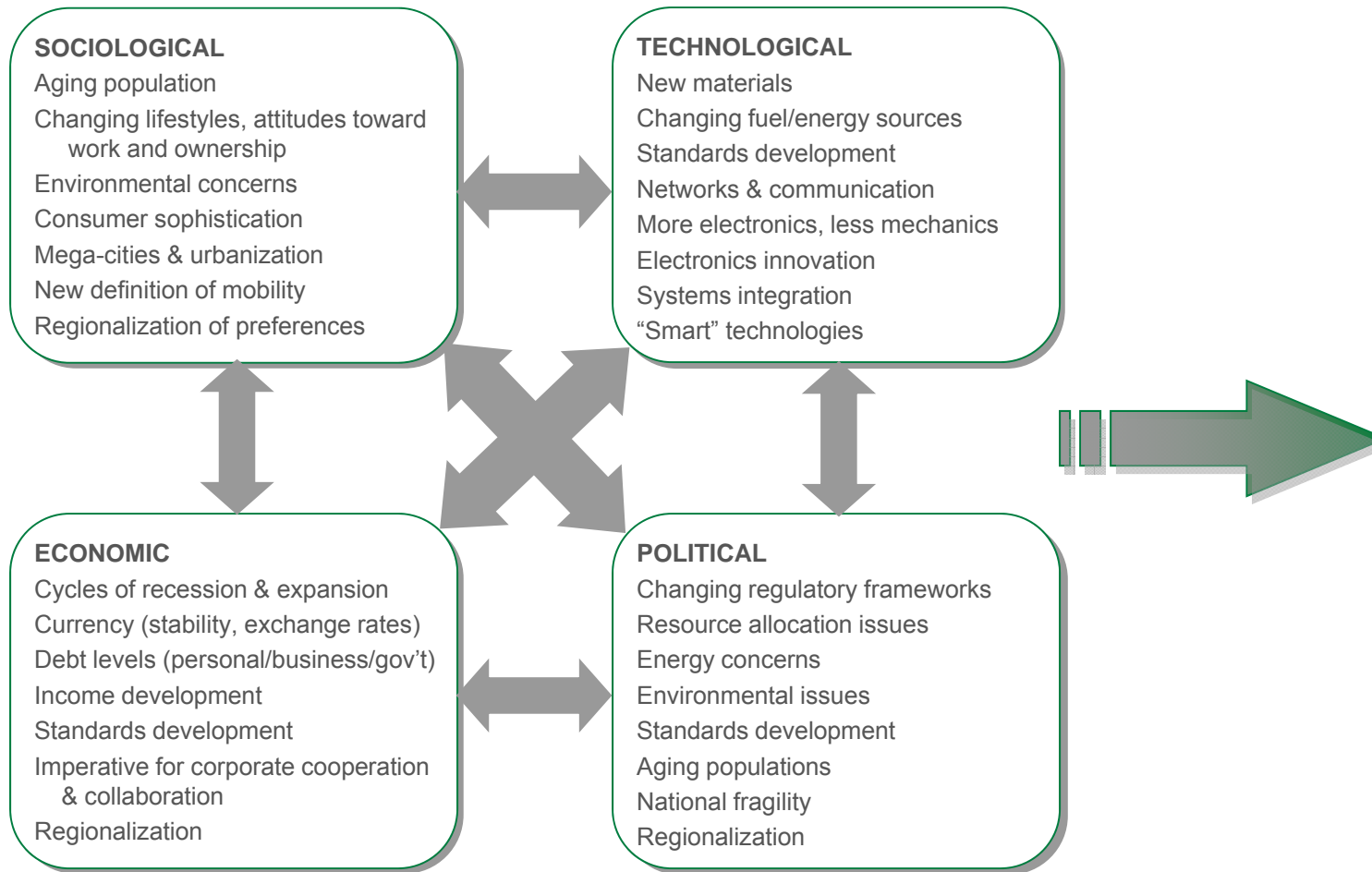
Development
of tailor-made
training programs
and content

One of the largest private
education partners in Germany

Focused mini-sessions
Multi-day seminars
Intensive courses
Complete vocational and
academic programs



A STEP into the future



A future of paradoxes

- Globalization – regionalization
- Fewer people – more demands *and* More people – fewer demands
- Abundance – scarcity
- Haves – have-nots
- Standards – individualization
- Automation – humanization
- Livability – employability

Who's going to fix what where and why?

Developed	Factor	Developing
↑	Elderly	↓
↑	Individualistic	↓
↑	High tech	↗
↑	Environmentally conscious	↗
↗	Need for qualified workers	↗
↓	Number of qualified workers	↑
→	Urbanization	↑
↑	Regionalization	↑

- Produce globally, maintain locally
- Tailor service to regional needs and requirements
- Different mobility patterns → different maintenance patterns
- Train locally, prepare globally
- Different technologies → different skill sets
- Different cultures → different teaching/learning requirements

Population (in billions)

Area	2011	2050	Trend
Africa	0.9	1.9	↑
Asia	4.5	5.2	↗
Europe	0.7	0.7	→
Latin America	0.4	0.8	↑
North America	0.5	0.5	→

Population growth

Area	Rate (%)	Double in (y)
World	1.77	40
NAFTA	1.00	70
EU27 + EFTA	0.27	259
EU27	0.21	333



An extremely uncertain, exceedingly complex problem with no one-size-fits-all solution

Old Europe ... or a new Europe?

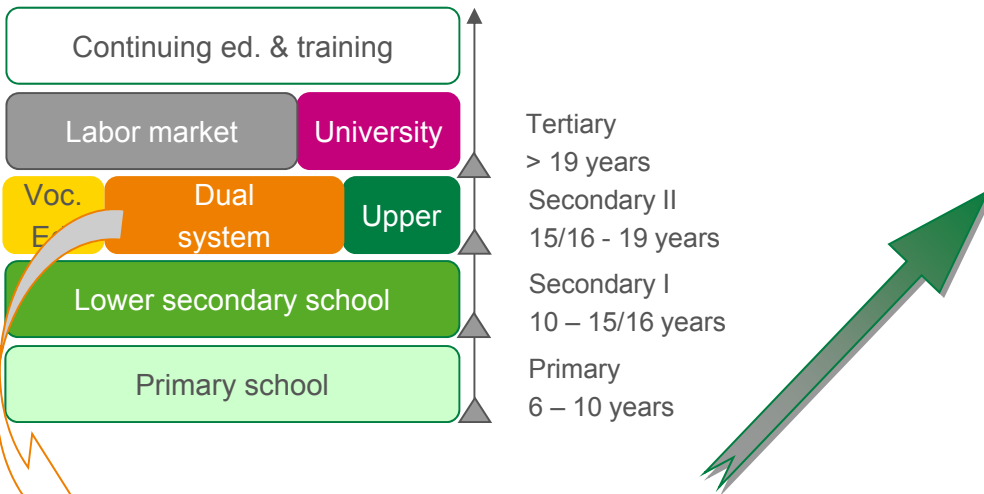
European Union

- 27 member countries (plus Croatia, July 2013) *plus*
5 candidate countries (Iceland, Macedonia, Montenegro, Serbia, Turkey) *plus*
2 potential candidates (Albania, Bosnia & Herzegovina) *plus*
EFTA (Iceland, Norway, Liechtenstein & Switzerland)
- 23 official languages (more to come)
German primary L1 (18%); English largest L2 (50%+)
- Euro zone = 17 countries
- Educational policy mandated at national or sub-national level
- *Plus?*
 - Countries from Eurovision Song Contest?
 - A North-African Free-Trade Area?



An expanding, culturally diverse area encompassing both developed and developing countries

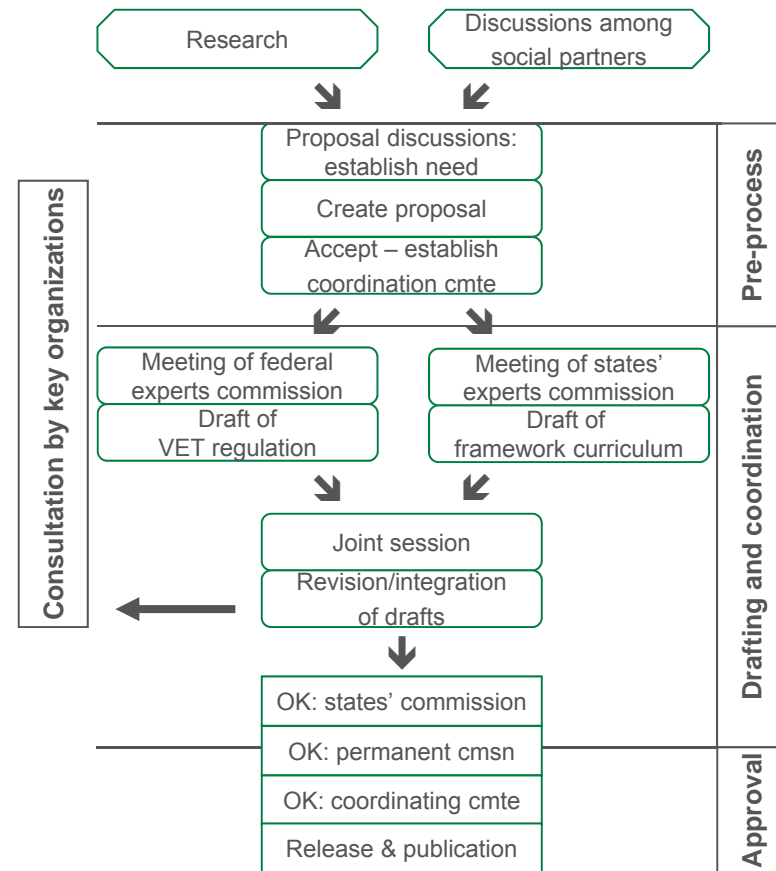
The German example



Vocational Education & Training (VET)

organized by	private sector	+	public sector
conducted in	companies	+	vocational schools
carried out as	workplace training	+	classroom tuition
on the basis of	training contract	+	compulsory attendance
regulated by	federal government	+	Länder
supervised by	chambers	+	school supervision bodies

Occupational specialty development and approval process



European vocational education and training

Bologna process (HE)

- Establish 3-cycle degree programs (bachelor, master, doctor) & Establish European Credit Transfer System (ECTS)
- Generally accepted at levels 6, 7, and 8 of EQF
- 47 signatory countries
- Signed 1999, effective 2010

Copenhagen process (VET)

- Increase mobility of qualified workforce throughout Europe through establishing credit-point system for vocational education and training (ECVET)
- Generally accepted up to level 5 and 6 of EQF, depending on type of qualification
- Currently endorsed by 32 ministries of education/labor
- Signed 2002, testing 2012, report and review 2014

Issues

- Recognition of qualifications across national boundaries
- Permeability within individual education systems and across national boundaries



Qualification frameworks

European qualification framework (EQF)

Learning-outcome-based description of knowledge, skills and competence over eight competency levels

Level	Knowledge	Skills	Competences
$\Sigma= 8$	<i>Theoretical or factual</i>	<i>Cognitive and practical</i>	<i>In terms of responsibility and autonomy</i>
2	Basic factual knowledge of a field of work/study	Basic cognitive and practical skills required to use relevant information in order to carry out tasks and to solve routine problems using simple rules and tools	Work/study under supervision with some autonomy
4	Factual and theoretical knowledge in broad contexts within a field of work/study	A range of cognitive and practical skills required to generate solutions to specific problems in a field of work/study	Exercise self-management within the guidelines of work/study contexts that are usually predictable, but are subject to change Supervise the routine work of others, taking some responsibility for the evaluation and improvement of work/study activities
6	Advanced knowledge of a field of work/study, involving a critical understanding of theories and principles	Advanced skills, demonstrating mastery and innovation, required to solve complex and unpredictable problems in a specialized field of work/study	Manage complex technical or professional activities or projects, taking responsibility for decision-making in unpredictable work/study contexts Take responsibility for managing professional development of individuals and groups

NQFs

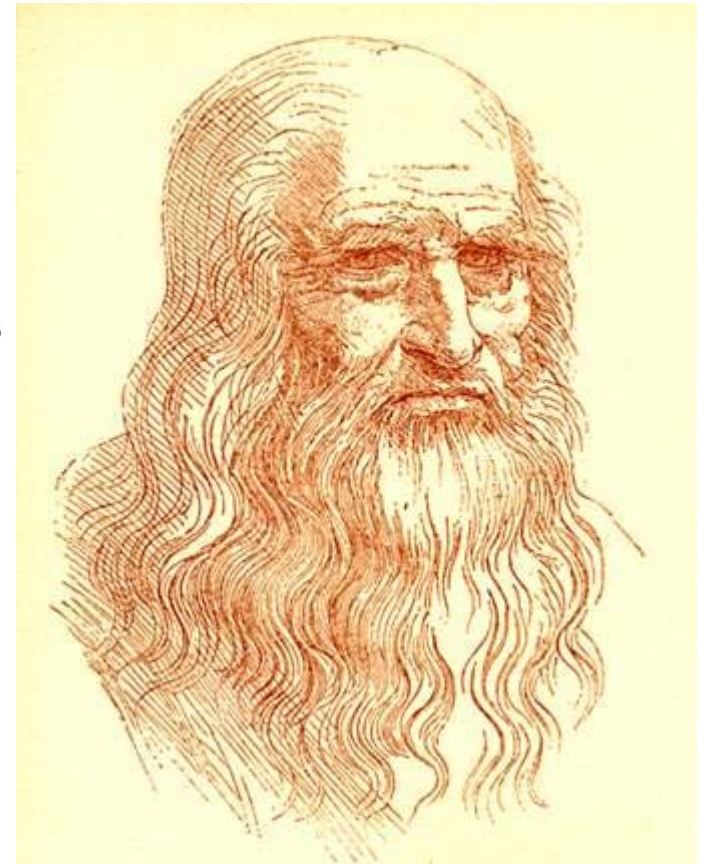
- Frameworks adapted for local usage, based on national requirements

SQFs

- Frameworks developed for a particular industry sector, also ideally aligned with EQF

Leonardo da Vinci Program

- Part of the EU's strategic framework for education and training
- Provide grants for multilateral projects
larger-scale actions, with organizations from different countries working together to develop working practices in the vocational education and training sector
 - Development of innovation (DOI)
improve training systems by producing innovative approaches to vocational education and training such as teaching materials, courses and methodologies
 - Transfer of innovation (TOI)
help to spread the most promising new developments
 - Thematic networks (TN)
work on priority areas
 - Accompanying measures (AM)
promote the results of other projects funded by the program



What is DEKRA doing to help?

Start	Mon.	Type	Title	Aim	Reference
2007	2010	DOI	Ways to sustainability	Develop models and approaches for implementing and applying EQF/NQF/SQF	www.project-ways.eu/
2007	2008	DOI	EASCMF	Establish a competence meta-framework for the European automotive sector	www.eascmf.eu/
2007	2009	TOI	CarEasyVet	Develop applications for applying credit-point systems in relation to qualification frameworks	www.careasyvet.net/
2008	2011	DOI	EQF-Predict	Develop transnational standards for evaluating curricula in terms of EQF	www.project-predict.eu/
2008	2011	DOI	Building Bridges	Establish and correlate sectoral qualification frameworks with EQF	www.heqbridges.eu/
2008	2011	TN	VETAS	Establish virtual platform for sharing and collaboration among key players (automotive)	www.vetas.eu/
2008	2012	DOI	Be-TWIN	Develop and test tool for bi-directional credit transfer between ECVET and ECTS	www.betwin-project.eu/
2009	2012	TOI	NQF-SQF	Develop qualification comparability models between NQF/ SQF and EQF	www.project-nqf-sqf.eu/
2010	2012	TOI	Matching Frames	Develop practical methods and tools for assigning EQF levels to qualifications	www.matchingframes.uni-bremen.de/
2011	2014	TOI	MAS ECVET	Develop support instruments for applying ECVET in the automotive sector	In work

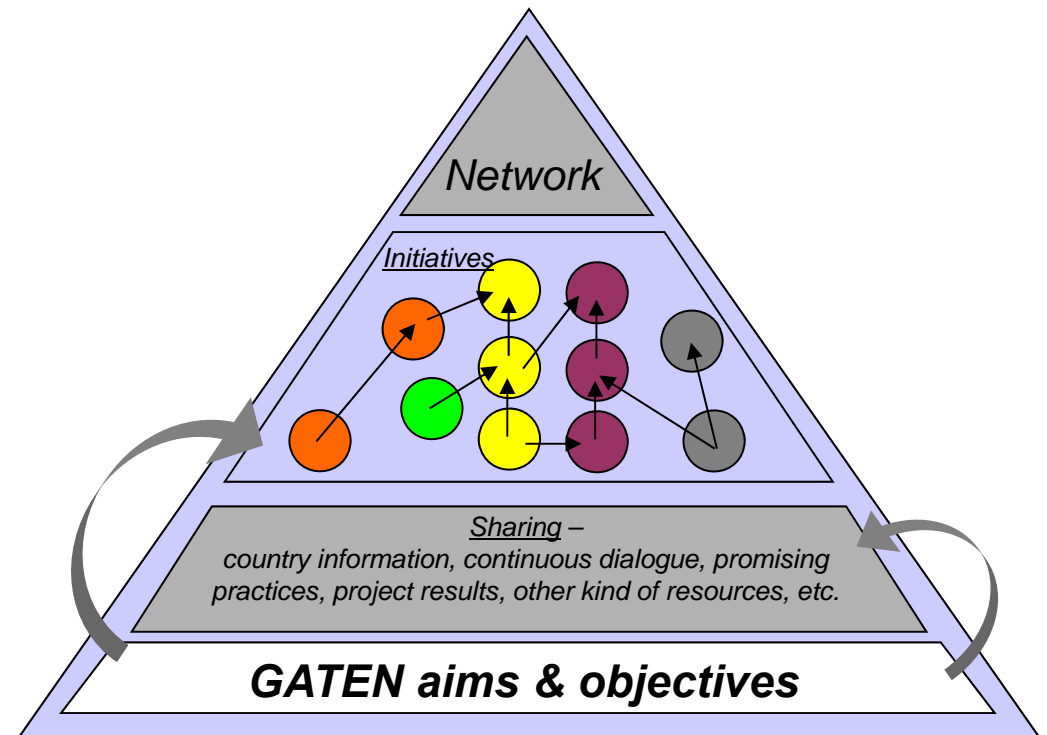
The GATEN project

Global Automotive Technical Education Network

- Preparatory grant from the German Ministry of Education and Research and funds from the National Science Foundation
- Two workshops – one each USA & Germany

Aims

- Establish international network of stakeholders
- Work toward development of agreed standards
- Encompass areas of supply and service as well as manufacturing
- Promote transparency and comparability of VET in automotive sector



Where do we go from here?

Learn about

- relevant technological developments
- innovations in education and training

Think about

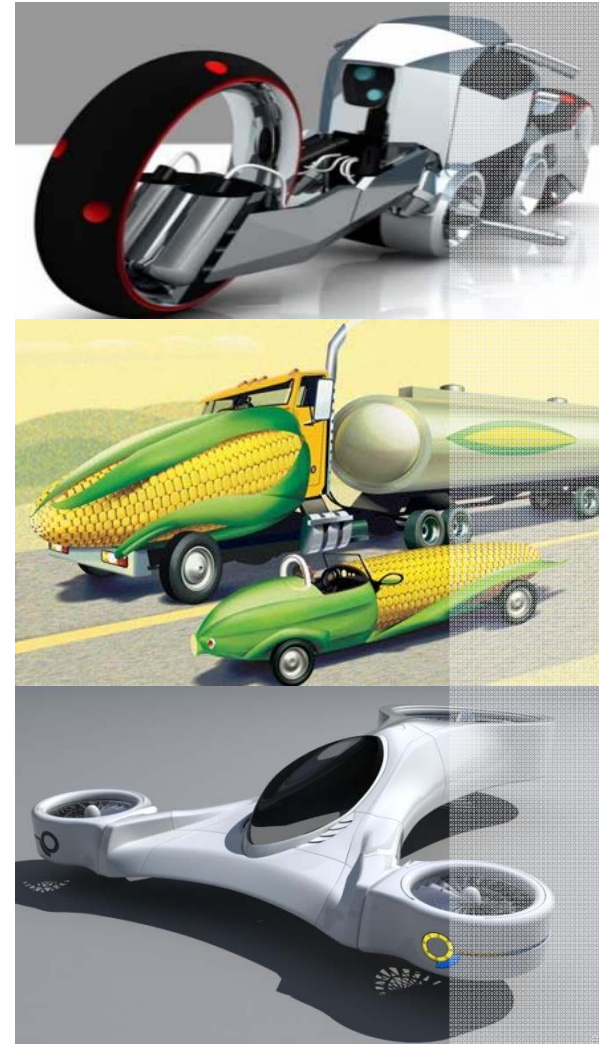
- social and economic consequences
- political and cultural impacts

Talk about

- everything with
- everyone you can

Collaborate

- with everyone involved
- because everyone is involved





On the safe side.

Thank you!

