

# Product group classification InnoTrans 2022

(from A-Z)

## Railway Technology

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3. Subassemblies and components ..... 15
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# Product group classification

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<b>Railway Technology</b>		
<b>1.</b>	<b>Railbound vehicles for public and freight transport</b>	
<b>1.1</b>	<b>Public transport rail cars</b>	
1.1.1	Local and regional public transport rail cars	
1.1.2	Long distance public transport rail cars	
1.1.3	Motor units and motor coaches	
<b>1.2</b>	<b>Freight cars</b>	
1.2.1	Covered wagons	
1.2.2	Loading units	
1.2.3	Flat wagons	
1.2.4	Self-discharging wagons	
1.2.5	Other standard-type rail cars	
1.2.6	Special-purpose rail cars	
1.2.7	Tank wagons	
<b>1.3</b>	<b>Locomotives</b>	
<b>1.4</b>	<b>Magnetic levitation trains</b>	
<b>1.5</b>	<b>Narrow-gauge railway vehicles</b>	
<b>1.6</b>	<b>Special-purpose cars</b>	
<b>1.7</b>	<b>Rack railway-train</b>	
<b>1.8</b>	<b>Other</b>	
<b>2.</b>	<b>Intermodal transport vehicles</b>	
<b>2.1</b>	<b>Other</b>	
<b>3.</b>	<b>Subassemblies and components</b>	
<b>3.1</b>	<b>Driving gear</b>	
3.1.1	Exhaust gas silencer	
3.1.2	Driving systems and electronics	
3.1.3	Traction motors	
3.1.4	Vehicle lubrication	
3.1.5	Generators	
3.1.6	Transmissions	
3.1.7	Hydraulic drive systems for railway vehicles	
3.1.8	Motors / Engines	
3.1.9	Traction motor ventilation	
3.1.10	Traction motor housing	
3.1.11	Traction motor preheaters	
3.1.12	Motor oil refilling systems	
3.1.13	Pneumatic material	
3.1.14	Wheelset gear sets	
3.1.15	Lubricating systems	
3.1.16	System technology	
<b>3.2</b>	<b>Energy / Electrotechnology</b>	
3.2.1	Automation technology	
3.2.2	Battery holders	
3.2.3	Batteries	
3.2.4	Battery isolators	
3.2.5	Ventilation / evacuation systems	
3.2.6	Operating and control panels	
3.2.7	DC / DC converters	
3.2.8	Diagnosing equipment	
3.2.9	Compressed air supply	
3.2.10	Pressure measuring equipment	
3.2.11	Electromechanical components	
3.2.12	Energy storage	
3.2.13	Energy supply systems	
3.2.14	Energy meter	
3.2.15	Earthing contacts	
3.2.16	Driver panels	
3.2.17	Master controller	
3.2.18	Vehicle control system	
3.2.19	Field bus components	
3.2.20	Floodlight keyboards	
3.2.21	Filling level measuring technology	
3.2.22	Handheld lamps	
3.2.23	Inductive Components	
3.2.24	Cables and lines	
3.2.25	Cable protection	
3.2.26	Cassettes	
3.2.27	Battery chargers	
3.2.28	Charging rectifiers	
3.2.29	Power switches and switchgear	
3.2.30	Circuit boards	
3.2.31	Control systems	
3.2.32	Tilting systems	
3.2.33	Registration and display systems	
3.2.34	Series terminals	
3.2.35	Relays	
3.2.36	Switching gear	
3.2.37	Switches	
3.2.38	Metal contacts	
3.2.39	Switch cabinets and accessories	
3.2.40	Fuses and accessories	
3.2.41	Special-purpose electric machines	
3.2.42	Connectors	
3.2.43	Control components	
3.2.44	Control cubicles	
3.2.45	Current collectors	
3.2.46	Power generating sets	
3.2.47	Current transformers	
3.2.48	Traction current converters & control systems	
3.2.49	Transformers	
3.2.50	Pantographs	
3.2.51	Overvoltage safety systems	
3.2.52	Inverters	
3.2.53	Interconnection systems	
3.2.54	Converters	
3.2.55	Resistances	
<b>3.3</b>	<b>Vehicle components and -systems</b>	
3.3.1	Exhaust filtering systems	
3.3.2	Exhaust silencer	
3.3.3	Axle guard sidebearer liners	
3.3.4	Axle guard sidebearer guides	
3.3.5	Acoustic systems	
3.3.6	Armature	
3.3.7	Exterior parts	
3.3.8	Exterior claddings	
3.3.9	Rail hydraulic systems	
3.3.10	Subassembly supports	
3.3.11	Fastening systems	
3.3.12	Lighting systems	
3.3.13	Ventilation systems	
3.3.14	Brake linings	
3.3.15	Brake pads	
3.3.16	Brake disks	
3.3.17	Braking systems	
3.3.18	Front fairings	
3.3.19	Gaskets	
3.3.20	Bogies	
3.3.21	Bogie pivot centre plates	
3.3.22	Compressed air technology	
3.3.23	Thrust collars for tramway bogies	
3.3.24	Rail tyres	
3.3.25	Passenger counting systems	
3.3.26	Vehicle cabins	
3.3.27	Springs / Spring systems	
3.3.28	Radio remote control systems	
3.3.29	Clevis guides	
3.3.30	Casing systems	
3.3.31	Articulations	
3.3.32	Rocker bearings	
3.3.33	Joint rod sockets	
3.3.34	Cardan shafts	
3.3.35	Friction bearings	
3.3.36	Cast metal wheels	
3.3.37	Integrated subassemblies	
3.3.38	Air ducts	
3.3.39	Carbon brushes	
3.3.40	Carbon strips	
3.3.41	Compressors	
3.3.42	Capacitors	
3.3.43	Ball bearings	
3.3.44	Cooling systems	
3.3.45	Couplers	
3.3.46	Couplings	
3.3.47	Coupling adaptors	
3.3.48	Bearing housings	
3.3.49	Profiles for lighting sittings	
3.3.50	Air filter	
3.3.51	Tilting technology	
3.3.52	Impact protection modules	
3.3.53	Sections	
3.3.54	Buffer	
3.3.55	Radar technology	
3.3.56	Wheelsets	
3.3.57	Wheelset pumps	
3.3.58	Friction pads for railway vehicles	
3.3.59	Rescue tools	
3.3.60	Sooty particle filters	
3.3.61	Rail brakes	

3.3.62 Hoses

3.3.63 Locks and fittings

3.3.64 Welded assemblies, underfloor-components

3.3.65 Vibration absorbers

3.3.66 Sensors

3.3.67 Self-locking nuts

3.3.68 Special sections for rail car construction

3.3.69 Wheel flange lubrication systems

3.3.70 Shock absorbers

3.3.71 Flexible shunt assemblies

3.3.72 Testing systems

3.3.73 Thermocouples

3.3.74 Gangway installations

3.3.75 Valves

3.3.76 Connection systems

3.3.77 Wiring systems

3.3.78 Locking technology and systems

3.3.79 Haunch, air ducts and flow sections

3.3.80 Car bodies

3.3.81 Antifriction bearings

3.3.82 Resistance thermometers

3.3.83 Push / Pull devices

3.3.84 Coupler carriers

**3.4 Materials**

3.4.1 Bent components in aluminium / steel

3.4.2 Insulating materials

3.4.3 Sealing materials

3.4.4 Flat products

3.4.5 Rubber articles

3.4.6 Rubber-metal connections

3.4.7 Cast parts

3.4.8 Insulation materials

3.4.9 Adhesives

3.4.10 Structural foams

3.4.11 Plastics

3.4.12 Coating

3.4.13 Sound insulation materials

3.4.14 Melamine resin foam

3.4.15 Upholstery materials

3.4.16 Foams

3.4.17 Lubricants

3.4.18 Protective films

3.4.19 Special light-weight insulating materials

3.4.20 Steel products

3.4.21 Composite materials

3.4.22 Water varnish

3.4.23 Materials for lightweight and sandwich construction

**3.5 Other**

**4. Service for vehicles**

**4.1 Maintenance**

4.1.1 Exhaust systems

4.1.2 Re-railing equipment and systems

4.1.3 Sand filling systems

4.1.4 Bogie testing plants

4.1.5 Corner force measuring equipment

4.1.6 Disposal systems

4.1.7 Replacement parts

4.1.8 Lifting devices for tracked vehicles

4.1.9 Inspection devices and systems

4.1.10 Maintenance systems

4.1.11 Varnishing devices

4.1.12 Measuring equipment and systems

4.1.13 Wheel force measurement systems

4.1.14 Wheelset treatment

4.1.15 Wheelset diagnostic systems

4.1.16 Category of maintenance

4.1.17 Foils / films

4.1.18 Testing devices and systems

4.1.19 Maintenance machines

4.1.20 Workshop equipment

**4.2 Cleaning**

4.2.1 Vehicle washing systems

4.2.2 Surface treatment

4.2.3 Cleaning equipment / technology

4.2.4 Special cleaning services

4.2.5 Waste-water-treatment

**4.3 Refurbishment**

4.3.1 Expertises

4.3.2 Restoration

4.3.3 Damage repair and management

**4.4 Services**

4.4.1 Railway application testing

4.4.2 Design

4.4.3 Commissioning

4.4.4 Engineering services

4.4.5 Maintenance management systems

4.4.6 Marking

4.4.7 Systems analysis

4.4.8 Transport of railway vehicles

4.4.9 Workshop services

**4.5 Other**

## Interiors

**5. Interiors**

**5.1 Vehicle equipment**

5.1.1 Handicapped accessible equipment

5.1.2 Floor coverings

5.1.3 Window systems

5.1.4 Driver consoles

5.1.5 Luggage racks

5.1.6 Stay bars

5.1.7 Hand-held lamps

5.1.8 Interior furnishings

5.1.9 Lamps

5.1.10 Upholstery systems

5.1.11 Roller blind systems

5.1.12 Seats and seating systems

5.1.13 Sanitary equipment

5.1.14 Sanitary cubicles

5.1.15 Textiles

5.1.16 Glazing systems

**5.2 Finishings / Information / Air conditioning / Security**

5.2.1 Anti-pinch systems

5.2.2 Fire protection isolation

5.2.3 Flooring systems

5.2.4 Fans for railway components

5.2.5 Heating systems

5.2.6 Information- and advertising systems

5.2.7 Interior design systems

5.2.8 Interior lining

5.2.9 Installation equipment

5.2.10 Cabin air ventilation / -climatisation

5.2.11 Air-conditioning systems

5.2.12 Emergency systems

5.2.13 Sanitary systems

5.2.14 Door furniture

5.2.15 Door opener push buttons

5.2.16 Door controls

5.2.17 Door systems

5.2.18 Surveillance systems

5.2.19 Detrainment systems

**5.3 Travel Catering & Comfort Services**

5.3.1 Station catering

5.3.2 Accessories / Amenities

5.3.3 Catering service provider

5.3.4 Beverages

5.3.5 Hygiene

5.3.6 Kitchen equipment

5.3.7 Refrigeration and counter systems

5.3.8 Food

5.3.9 Trolleys

5.3.10 Service equipment

5.3.11 Food dispensing

5.3.12 Food / Beverage vending machines

## Railway Infrastructure

**6. Infrastructure / Railway Construction**

**6.1 Construction work**

6.1.1 Electrical power systems

6.1.2 Overhead contact line

6.1.3 Building construction

6.1.4 Civil engineering and construction

6.1.5 Maintenance

6.1.6 Control and signalling technology

6.1.7 Superstructures

- 6.1.8 Permanent way welding technology
- 6.1.9 Specialised civil engineering work
- 6.1.10 Telecommunications
- 6.1.11 Civil and underground engineering
- 6.1.12 Tunnel and bridge construction
- 6.2 Planning and monitoring of construction works**
- 6.2.1 Tendering and tender evaluation
- 6.2.2 Site exploration / materials testing
- 6.2.3 Work logistics
- 6.2.4 Supervision of works
- 6.2.5 Planning and control
- 6.2.6 Planning of superstructure, underground, and civil engineering works
- 6.2.7 Planning of signalling and control systems
- 6.2.8 Planning of electric power supply
- 6.2.9 Planning review
- 6.2.10 Project planning
- 6.2.11 Survey
- 6.3 Railway track machinery, equipment and tools**
- 6.3.1 Excavators
- 6.3.2 Ballast cleaning machines
- 6.3.3 Overhead line vehicles
- 6.3.4 Equipment
- 6.3.5 Track cars
- 6.3.6 Track recording cars
- 6.3.7 Track laying and track construction machines
- 6.3.8 Heavy machinery and tower cranes
- 6.3.9 Light machines
- 6.3.10 Measuring equipment and -systems
- 6.3.11 Rail milling machines
- 6.3.12 Rail-carrying train
- 6.3.13 Grinding machines
- 6.3.14 Grinding tools
- 6.3.15 Ballast regulating machines
- 6.3.16 Safety tools
- 6.3.17 Ballast tamping machines
- 6.3.18 Track maintenance vehicles
- 6.3.19 Track warning systems for machinery
- 6.3.20 Switch inspection systems
- 6.3.21 Wagons for turnout transport
- 6.3.22 Road-rail vehicles
- 6.4 Station buildings**
- 6.4.1 Platforms
- 6.4.2 Platform edges
- 6.4.3 Platform systems
- 6.4.4 Guide systems for blind
- 6.4.5 Air conditioning equipment
- 6.5 Technical equipment / Building materials**
- 6.5.1 Axle counters
- 6.5.2 Construction site lighting
- 6.5.3 Friction buffer stops
- 6.5.4 Bridge girders
- 6.5.5 Third rail
- 6.5.6 End-of-track buffers
- 6.5.7 Electric points (switch) heater
- 6.5.8 Protection against vibrations
- 6.5.9 Catenaries
- 6.5.10 Power line masts
- 6.5.11 Panel track laying
- 6.5.12 Surface stabilisation systems
- 6.5.13 Wheel flat detector
- 6.5.14 Handrails
- 6.5.15 Geotextiles
- 6.5.16 Steel grating
- 6.5.17 Concrete track and points sleepers
- 6.5.18 Siding track facilities
- 6.5.19 Car retarder
- 6.5.20 Re-ballasting of tracks
- 6.5.21 Track bed systems
- 6.5.22 Track circuits
- 6.5.23 Track systems
- 6.5.24 Hot box detection system
- 6.5.25 Insulation for railway catenary
- 6.5.26 Insulating joints
- 6.5.27 Isolated fastenings
- 6.5.28 Cable channels
- 6.5.29 Long material equipment for road transport of rails
- 6.5.30 Long rails
- 6.5.31 Mass-Spring-Systems
- 6.5.32 Plotting paper
- 6.5.33 Measuring equipment
- 6.5.34 Buffer stops
- 6.5.35 Marshalling equipment
- 6.5.36 Noise deadening
- 6.5.37 Track switchgear
- 6.5.38 Rails
- 6.5.39 Rail guards / cow-catchers
- 6.5.40 Rail fastening equipment
- 6.5.41 Rail lubrication systems
- 6.5.42 Rail link units
- 6.5.43 Lubricants
- 6.5.44 Ballast
- 6.5.45 Railroad ties (sleepers)
- 6.5.46 Vibration damping
- 6.5.47 Safety engineering
- 6.5.48 Special products for transport route construction
- 6.5.49 Electric power supply
- 6.5.50 Protection systems
- 6.5.51 Wearing- and sliding plastics, insulation plastics
- 6.5.52 Points (switches) and crossings
- 6.5.53 Points (switch) mechanisms
- 6.5.54 Points (switch) heaters
- 6.5.55 Points (switch) lubricating equipment
- 6.5.56 Wayside Train Monitoring Systems
- 6.5.57 Train preheating equipment
- 6.5.58 Tongue rolls for switches
- 6.5.59 Area lighting
- 6.5.60 Fibre Optic Sensing
- 6.6 Signalling and control systems**
- 6.6.1 Level crossing systems
- 6.6.2 Acoustics
- 6.6.3 Operating control engineering
- 6.6.4 Earth terminals for track construction
- 6.6.5 Remote control equipment
- 6.6.6 Cable ducts
- 6.6.7 Control systems
- 6.6.8 Communications technology
- 6.6.9 Switchgears in earth systems
- 6.6.10 Signalling systems
- 6.6.11 Warning systems for tracklaying sites
- 6.7 Overhead line equipment**
- 6.7.1 Wires and cables
- 6.7.2 Engineering consultant
- 6.7.3 Installation
- 6.7.4 Maintenance
- 6.7.5 Insulators and section insulators
- 6.7.6 Clamps and cast parts
- 6.7.7 Tensioning devices
- 6.7.8 Suspension wire components
- 6.7.9 Overhead line measuring systems
- 6.7.10 Overhead installations
- 6.7.11 Overhead line tests
- 6.7.12 Steady arms and suspensions
- 6.7.13 Tools
- 6.8 Other services**
- 6.8.1 Health and safety
- 6.8.2 Protection of construction sites
- 6.8.3 Site monitoring
- 6.8.4 Electromagnetic compatibility
- 6.8.5 Platform covering
- 6.8.6 Inspection of tracks and points (switches)
- 6.8.7 Recycling of building materials
- 6.8.8 Machine repair
- 6.8.9 Safety during hazardous cargo transport
- 6.8.10 Ecological surveys
- 6.8.11 Survey
- 6.9 Other**

## Public Transport

- 7. Public Transport / Fixed structures**
- 7.1 Streetbound vehicles for local and regional public transport**
- 7.2 Station and stop premises**
- 7.2.1 Dispatch facilities
- 7.2.2 Lifts
- 7.2.3 Station furnishings
- 7.2.4 Station / telephone box doors
- 7.2.5 Platform lighting
- 7.2.6 Station dividing walls / doors
- 7.2.7 Counters
- 7.2.8 Passenger counting systems
- 7.2.9 Time-table and info-showcases
- 7.2.10 Bicycle parking facilities
- 7.2.11 Moving pavements
- 7.2.12 Escalators
- 7.2.13 Stop furnishings
- 7.2.14 Process control systems
- 7.2.15 Furnishing for control stations

7.2.16	Poster showcases	8.2.3	Journey analysis systems	<b>10.</b>	<b>Services</b>
7.2.17	Luggage locker facilities	8.2.4	Geo information systems	<b>10.1</b>	<b><u>Institutions / Media / Transport companies</u></b>
7.2.18	Customer service	8.2.5	Efficiency control	10.1.1	Authorities
7.2.19	System integrators	<b>8.3</b>	<b><u>Components for information technology</u></b>	10.1.2	Industrial parks
7.2.20	Roofing systems	8.3.1	Sensors	10.1.3	Freight traffic companies
7.2.21	Clock systems	<b>8.4</b>	<b><u>Communication systems</u></b>	10.1.4	Freight traffic centres
7.2.22	Shelters	8.4.1	Digital radio systems	10.1.5	Passenger transport companies
7.2.23	Path control systems	8.4.2	Interphone systems	10.1.6	Technology and incubation units
7.2.24	Advertisement systems	8.4.3	Internet systems	10.1.7	Associations
7.2.25	Weather protection	8.4.4	Mounting systems for train radio equipment	10.1.8	Organisations
<b>7.3</b>	<b><u>Passenger information systems</u></b>	8.4.5	Train radio systems	10.1.9	Joint transport authorities
7.3.1	Display-cases	<b>8.5</b>	<b><u>Management systems</u></b>	10.1.10	Publishing houses
7.3.2	GPS-controlled time displays	8.5.1	Plant management systems	10.1.11	Business development
7.3.3	Infotainment systems	8.5.2	Depot management	10.1.12	Science, research and development
7.3.4	Interactive Voice Response Systems (IVR)	8.5.3	Facility management	10.1.13	Railway infrastructure companies
7.3.5	LED displays	8.5.4	Infrastructure management systems	<b>10.2</b>	<b><u>Services in the transport industry</u></b>
7.3.6	Plasma displays	8.5.5	Lean production	10.2.1	Health and safety
7.3.7	Coach controllers	<b>8.6</b>	<b><u>Operation - Rail systems</u></b>	10.2.2	Recruitment agency
7.3.8	Seat reservation systems	<b>8.7</b>	<b><u>Location and navigation systems</u></b>	10.2.3	Services shop floor level
7.3.9	System controllers	<b>8.8</b>	<b><u>Planning systems</u></b>	10.2.4	Documentation
7.3.10	TFT flat panel displays	8.8.1	Time-table planning	10.2.5	Passenger survey
7.3.11	TFT-LCD displays	8.8.2	Vehicle deployment	10.2.6	Financial services
<b>7.4</b>	<b><u>Ticket management</u></b>	8.8.3	Optimisation	10.2.7	Education and training
7.4.1	Settlement systems	8.8.4	Personnel- and service planning	10.2.8	Risk protection
7.4.2	Board computer	8.8.5	Resource planning (personnel, wagons, locomotives)	10.2.9	Trade
7.4.3	Chip cards	8.8.6	Roster planning	10.2.10	Engineering services
7.4.4	Revenue management	<b>8.9</b>	<b><u>Safety and control engineering</u></b>	10.2.11	Leasing
7.4.5	Electronic payment systems	8.9.1	Cyber security	10.2.12	Marketing
7.4.6	Ticket defacing	8.9.2	Passenger alarm systems	10.2.13	Testing services
7.4.7	Ticket issuing	8.9.3	Computer-assisted operations control system	10.2.14	Recycling
7.4.8	Mobile ticketing	8.9.4	Video surveillance systems (CCTV)	10.2.15	Expert services
7.4.9	RFID media	<b>8.10</b>	<b><u>Software / Software development</u></b>	10.2.16	Insurances
7.4.10	Rate management	8.10.1	Computer-based training programme	10.2.17	Certification
7.4.11	Access systems	8.10.2	E-Procurement	<b>10.3</b>	<b><u>Analysis / Consulting / Development / Planning</u></b>
<b>7.5</b>	<b><u>Parking area management</u></b>	8.10.3	Analyses and calculations relating to the dynamics of vehicle movement	10.3.1	Execution planning
7.5.1	Parking permits	8.10.4	Software for project management	10.3.2	Consultancy
<b>7.6</b>	<b><u>Cleaning / Waste Disposal</u></b>	<b>8.11</b>	<b><u>Traffic Management</u></b>	10.3.3	Design
7.6.1	Services	8.11.1	Traffic data determination	10.3.4	Engineering
7.6.2	Cleaning and waste disposal equipment	8.11.2	Traffic information systems	10.3.5	Complete solution for planning and design
7.6.3	Washing and toilet facilities	8.11.3	Traffic engineering	10.3.6	Noise and vibration reduction
<b>7.7</b>	<b><u>Safety and control</u></b>	8.11.4	Traffic control systems	10.3.7	Studies, conceptual and system planning
7.7.1	Security	<b>8.12</b>	<b><u>Other</u></b>	10.3.8	Project planning
7.7.2	Fire detection systems	<b>9.</b>	<b>Freight traffic logistics</b>	10.3.9	Simulation / Calculation of power networks
7.7.3	Fire protection systems	<b>9.1</b>	<b><u>Fleet management systems</u></b>	10.3.10	Systemanalysis / -development
7.7.4	Fire extinguishing systems	<b>9.2</b>	<b><u>Hazardous cargo transports</u></b>	<b>10.4</b>	<b><u>Realisation / Project-Management</u></b>
7.7.5	Supervising services	<b>9.3</b>	<b><u>Identification systems</u></b>	10.4.1	Electric project management
7.7.6	Safety engineering	<b>9.4</b>	<b><u>Combined transport</u></b>	10.4.2	Contract and claims-, project and construction management
7.7.7	Monitoring systems	<b>9.5</b>	<b><u>RFID tracking</u></b>	<b>10.5</b>	<b><u>Other</u></b>
<b>7.8</b>	<b><u>Clothing / Workwear</u></b>	<b>9.6</b>	<b><u>Shipment tracking systems</u></b>	<b>10.6</b>	<b><u>Mobility+</u></b>
7.8.1	Headgear	<b>9.7</b>	<b><u>Loading / Unloading systems and organisation</u></b>	10.6.1	Autonomous driving
7.8.2	Shoes	<b>9.8</b>	<b><u>Interchangeable containers, changing systems</u></b>	10.6.2	Bike sharing
7.8.3	Protective clothing	<b>9.9</b>	<b><u>Swap bodies, systems</u></b>	10.6.3	Car sharing
7.8.4	Textiles	<b>9.10</b>	<b><u>Other</u></b>	10.6.4	Chauffer-Service
<b>7.9</b>	<b><u>Other</u></b>			10.6.5	Digital mobility platforms
<b>8.</b>	<b>Transport IT</b>			10.6.6	First/last mile
	<b>Transport management / Data processing / Information / Communication</b>				
<b>8.1</b>	<b><u>E-Business</u></b>				
<b>8.2</b>	<b><u>Information technology / quality assurance systems</u></b>				
8.2.1	Testing and analysis systems				
8.2.2	Real-time statistics				

- 10.6.7 E-Scooter sharing
- 10.6.8 Car rental
- 10.6.9 Mobility apps
- 10.6.10 Ridepooling
- 10.6.11 Rideselling
- 10.6.12 Ridesharing
- 10.6.13 Taxiservices
- 10.6.14 Vertical Take-Off and Landing VTOL
- 10.6.15 Other

## Tunnel Construction

### 11. Tunnel Construction

#### 11.1 Construction machines, -parts and components

- 11.1.1 Equipment for removing excavated material
- 11.1.2 Power plant
- 11.1.3 Rock-crushing equipment
- 11.1.4 Building site equipment
- 11.1.5 Drilling platforms, supports and accessories
- 11.1.6 Hammer drill
- 11.1.7 Drilling steels and rock drilling bits
- 11.1.8 Drilling derricks
- 11.1.9 Moisture separators
- 11.1.10 Conveyor belt and -systems
- 11.1.11 Geotechnical instruments
- 11.1.12 Track transport and carrying devices
- 11.1.13 Pick wheels
- 11.1.14 Hydraulic excavators & breakers
- 11.1.15 Injection devices and accessories
- 11.1.16 Injection packer and accessories
- 11.1.17 Injection hose systems
- 11.1.18 Cables and accessories
- 11.1.19 Compressors and pneumatical tools
- 11.1.20 Cranes / Lifting equipment
- 11.1.21 Machines and systems for track construction
- 11.1.22 Microtunnelling and trenchless headings
- 11.1.23 Piling equipment / systems
- 11.1.24 Pumps
- 11.1.25 Shaft boring devices
- 11.1.26 Lining and scaffolding
- 11.1.27 Excavating machines for slurry trenches
- 11.1.28 Probe / diamond core cutters
- 11.1.29 Rail-head equipment / drilling jibs
- 11.1.30 Transport- and feed systems
- 11.1.31 Tunnel boring machines
- 11.1.32 Full face TBMs
- 11.1.33 Grouting, pouring and injection machines
- 11.1.34 Heading shields
- 11.1.35 Capstans
- 11.1.36 Crushing machines
- 11.1.37 Access equipment

#### 11.2 Finishing

- 11.2.1 Support devices / support

arches / steel supports / lattice girders

- 11.2.2 Compensating plate
- 11.2.3 Building industry
- 11.2.4 Fastening systems
- 11.2.5 Lighting systems
- 11.2.6 Concrete vibrators
- 11.2.7 Ground freezing
- 11.2.8 Ground stabilisation
- 11.2.9 Improvement of land
- 11.2.10 Electrification
- 11.2.11 Electrotechnology
- 11.2.12 Dedusting systems
- 11.2.13 Drainage and pump systems
- 11.2.14 Rock bolts / anchors
- 11.2.15 Gas-extraction equipment / systems
- 11.2.16 Impregnate / Sealing of facing
- 11.2.17 Air conditioning / ventilation
- 11.2.18 Air conduction systems
- 11.2.19 Air cleaning / waste-air disposal
- 11.2.20 Technical engineering and terotechnology
- 11.2.21 Relining
- 11.2.22 Pipes and pipe connections
- 11.2.23 Shaft sinking
- 11.2.24 Shaft linings
- 11.2.25 Slurry walls, shields and trenches
- 11.2.26 Drill-and-blast tunnelling
- 11.2.27 Tunnel supports
- 11.2.28 Power systems
- 11.2.29 Tunnel coatings
- 11.2.30 Tunnel membranes, water stops
- 11.2.31 Planking
- 11.2.32 Reinforcement and tensioning device
- 11.2.33 Gates and doors

#### 11.3 Building and other materials

- 11.3.1 Concrete
- 11.3.2 Bitumen
- 11.3.3 Injection products
- 11.3.4 Gypsum
- 11.3.5 Lime
- 11.3.6 Gravel
- 11.3.7 Mortar
- 11.3.8 Sand
- 11.3.9 Foam and polymeres
- 11.3.10 Ballast
- 11.3.11 Explosives
- 11.3.12 Shotcrete / Concrete additives
- 11.3.13 Clay
- 11.3.14 Grouting materials
- 11.3.15 Cement and additives

#### 11.4 Maintenance

- 11.4.1 Preservation, decontamination, backfitting
- 11.4.2 Hydraulic service equipment
- 11.4.3 Lubricants
- 11.4.4 Tunnel maintenance

#### 11.5 Safety features

- 11.5.1 Safety at work
- 11.5.2 Site safety
- 11.5.3 Fire protection
- 11.5.4 Protection against dangers

- 11.5.5 Control systems
- 11.5.6 Measurement / Examination / Control and test equipment
- 11.5.7 Personal safety
- 11.5.8 Safety equipment / -systems
- 11.5.9 Monitoring- / Warning- / Alarm systems
- 11.5.10 Safety lighting
- 11.5.11 Escape route doors
- 11.5.12 Fire protection doors

#### 11.6 Communication

- 11.6.1 Radio systems
- 11.6.2 Interphone systems
- 11.6.3 Internet systems
- 11.6.4 Underground communications
- 11.6.5 Managementsystems
- 11.6.6 Software
- 11.6.7 Telecommunication
- 11.6.8 Video systems

#### 11.7 Services / Consulting

- 11.7.1 Calls for tenders / drafting and awarding contracts
- 11.7.2 Construction-site logistics
- 11.7.3 Authorities
- 11.7.4 Consultancy
- 11.7.5 Operational, environmental and safety equipment / systems
- 11.7.6 Documentation
- 11.7.7 Trade publications
- 11.7.8 Financing / Insurance
- 11.7.9 Geology
- 11.7.10 Geotechnical services
- 11.7.11 Engineering services
- 11.7.12 Expert services
- 11.7.13 Monitoring harmful substances
- 11.7.14 System analysis, -development
- 11.7.15 Technology centre
- 11.7.16 Associations, organisations
- 11.7.17 Publishers
- 11.7.18 Measurement
- 11.7.19 Contract and claims-, project and construction management
- 11.7.20 Science, research & development
- 11.7.21 Certification

#### 11.8 Clothing / Workwear

- 11.8.1 Geo textiles
- 11.8.2 Headgear
- 11.8.3 Protective clothing
- 11.8.4 Shoes

#### 11.9 Other