

TEC LIST OF APPROVED TECHNOLOGIES

مجالات التكنولوجيا المعتمدة لدى مركز الإبداع التكنولوجي



الشركة الوطنية لمشاريع التكنولوجيا
National Technology Enterprises Company

Technology Entrepreneurship Center (TEC)

TEC LIST OF APPROVED TECHNOLOGIES

The TEC list of Approved Technologies, structured into 10 main sectors, is as follows:

1. Electronics, IT and Telecommunications
2. Industrial Manufacturing, Material and Transport Technologies
3. Other Industrial Technologies
4. Energy
5. Physical and Exact Sciences
6. Biological Sciences
7. Agriculture and Marine Resources
8. Agro-food Industry
9. Measurements and Standards
10. Protecting Man and Environment

1. ELECTRONICS, IT AND TELECOMMUNICATIONS

1.1. Electronics, Micro-electronics

- Automation, Robotics Control Systems
- Digital Systems, Digital Representation
- Electronic circuits, components and equipment
- Electronic engineering
- Embedded Systems and Real Time Systems
- High Frequency Technology, Microwaves
- Magnetic and super conductory materials/devices
- Micro-engineering
- Micromachining
- Nanotechnologies related to electronics and microelectronics
- Optical Networks and Systems
- Peripherals Technologies (Mass Data Storage, Display Technologies) related to electronics and microelectronics
- Printed circuits and integrated circuits
- Quantum Informatics
- Semiconductors
- Smart cards and access systems
- Environmental and Biometrics Sensors, Actuators

1.2. Information Processing, Information System, Workflow Management

- Advanced Systems Architecture
- Archivistics/Documentation/Technical Documentation
- Artificial Intelligence (AI)
- Computer Games



- Computer Hardware
- Computer Software
- Computer Technology/Graphics, Meta Computing
- Data Processing / Data Interchange, Middleware
- Data Protection, Storage Technology, Cryptography, Data Security
- Databases, Database Management, Data Mining
- Electronic Commerce, Electronic Payment
- Imaging, Image Processing, Pattern Recognition
- Information Technology/Informatics
- Internet Technologies/Communication (Wireless, Wi-Fi, Bluetooth)
- Knowledge Management, Process Management
- Simulation
- Speech Processing/Technology
- User Interfaces, Usability
- Electronic Signature
- Building Automation Software
- Remote Control
- Smart Appliances

1.3. IT and Telematics Applications

- Applications for Health
- Applications for Tourism
- Applications for Transport and Logistics
- ASP Application Service Providing
- e-Government
- Environment Management Systems & Documental Management Systems
- GIS Geographical Information Systems
- CRM - Customer relationship Management
- Quality Management System
- Maintenance Management System
- Operation Planning and Scheduler System
- Didactic System
- ICM - Internet Content Management
- Analysis Risk Management
- Work Hygiene and Safety Management

1.4. Multimedia

- Cultural Heritage
- E-Learning
- E-Publishing, Digital Content
- Human Language Technologies
- Information Filtering, Semantics, Statistics
- Visualization, Virtual Reality

1.5. Telecommunications, Networking

- Audiovisual Equipment and Communication
- Broadband Technologies
- Mobile Communications
- Narrow Band Technologies



- Network Technology, Network Security
- Radar
- Research Networking, GRID
- Satellite Technology/Systems/Positioning/Communication in GPS – Global Positioning System
- Signal Processing
- Hi-fi
- Description to Sound and Music Computing
- Description Image/Video Computing
- Communications Protocols, Interoperability
- Residential Gateway

2. INDUSTRIAL MANUFACTURING, MATERIAL AND TRANSPORT TECHNOLOGIES

2.1. Design and Modelling / Prototypes

2.2. Industrial Manufacture

- Cleaning (sandblasting, brushing)
- Coatings
- Drying
- Erosion, Removal (spark erosion, flame cutting, laser/plasma cutting, electrochemical erosion, waterjet cutting)
- Forming (rolling, forging, pressing, drawing)
- Hardening, heat treatment
- Joining techniques (riveting, screw driving, gluing)
- Jointing (soldering, welding, sticking)
- Machine Tools
- Machining (turning, drilling, moulding, milling, planning, cutting)
- Machining, fine (grinding, lapping)
- Mixing (powder, etc.), separation (sorting, filtering)
- Moulding, injection moulding, extrusion, sintering
- Surface treatment (painting, galvano, polishing, CVD, PVD)

2.3. Process control and logistics

2.4. Plant Design and Maintenance

2.5. Packaging / Handling

- Foil, films
- Laminate
- Packaging for machines
- Packaging for materials
- Plastic bags

2.6. Construction Technology

- Building Materials, Components and Methods
- Civil engineering
- Construction Equipment



- Fire Resistance/Safety
- Mechanical Engineering, Hydraulics, Vibration and Acoustic Engineering related to construction technology
- Pipeline Technology
- Pulp Technology related to construction technology
- Sensory/Multisensory Technology, Instrumentation related to construction technology
- Simulation, Simulation Engineering
- Sound Insulation
- Vacuum / High Vacuum Technology
- Gas Safety
- Security

2.7. Materials Technology

- Adhesives
- Building materials
- Ceramic Materials and Powders
- Colours and varnish
- Composite materials
- Fine Chemicals, Dyes and Inks
- Glass
- Iron and Steel, Steelworks
- Materials Handling Technology (solids, fluids, gases)
- Metals and Alloys
- Non-ferrous Metals
- Optical Materials
- Paper technology
- Plastics, Polymers
- Properties of Materials, Corrosion/Degradation
- Rubber
- Stone
- Advanced Textile Materials

2.8. Transport Infrastructure

- Air Transport
- Intermodal Transport
- Logistics
- Railway Transport
- Road Transport
- Traffic Engineering / Control Systems
- Transshipment Systems
- Water Transport

2.9. Transport and Shipping Technologies

- Design of Vehicles
- Hybrid and Electric Vehicles
- Railway Vehicles
- Road Vehicles
- Shipbuilding
- Traction/Propulsion Systems



2.10. Aerospace Technology

- Aeronautical technology / Avionics
- Aircraft
- Helicopter
- Satellite Navigation Systems
- Space Exploration and Technology

3. OTHER INDUSTRIAL TECHNOLOGIES

3.1. Other Industrial Technologies

- Cleaning Technology

3.2. Process Plant Engineering

3.3. Apparatus Engineering

3.4. Chemical Technology and Engineering

- Agro chemicals
- Anorganic Substances
- Colours, dyes related to Chemical Technology and engineering
- Electrical Engineering and Technology / Electrical Equipment
- Man made fibres
- Organic Substances
- Pharmaceuticals
- Plastics and Rubber related to Chemical Technology and engineering
- Soaps, detergents
- Special chemicals, intermediates
- Care, Hygiene, Beauty

3.5. Textiles Technology

- Component adhesives for strengthening of seam
- Dry filling related to Textiles Technology
- Dyeing related to Textiles Technology
- Finisher related to Textiles Technology
- Non-weaving related to Textiles Technology
- Solvent based glues for strengthening of edges and seam
- Thermoplastic textile fibres
- Weaving related to Textiles Technology
- Woven technical textiles for industrial applications

3.6. Footwear / Leather Technology

- Dry filling related to Footwear / Leather Technology
- Dyes related to Footwear / Leather Technology
- Tanned leather process related to Footwear / Leather Technology

3.7. Sound Engineering/Technology



3.8. Mining Technologies

3.9. Printing

- Flexography
- Printed Reel Material

3.10. Household Goods & Appliances

4. ENERGY

4.1. Energy Storage and Transport

- Heat storage
- Heat transport and supply, district heating
- Storage of electricity, batteries
- Transmission of electricity
- Transport and storage of gas and liquid fuels
- Transport and storage of hydrogen

4.2. Energy production, transmission and conversion

- Fuel cell, hydrogen production
- Fuel liquefaction, gasification
- Furnace technology, construction of heating boilers
- Generators, electric engines and power converters
- Heat exchangers
- Heat pump, cooling technologies
- Heating, ventilation
- Turbines, fluid machinery, reciprocating engines, combined heat and power

4.3. Fossil Energy Sources

- Coal and Hydrocarbons
- Gaseous fossil fuel
- Solid fossil fuel
- Liquid fossil fuel

4.4. Nuclear Fission / Nuclear Fusion

4.5. Renewable Sources of Energy

- Gaseous biomass
- Geothermal Energy
- Hydropower
- Liquid biomass
- Photovoltaics
- Solar/Thermal energy
- Solid biomass
- Unconventional and Alternative Energies
- Waste incineration
- Wind energy



4.6. Rational use of energy

- Energy management
- Lighting, illumination
- Process optimization, waste heat utilization
- Thermal insulation, energy efficiency in buildings

4.7. Other Energy Topics

- Combustion, Flames
- Fuel Technology

5. PHYSICAL AND EXACT SCIENCES

5.1. Astronomy

5.2. Chemistry

- Analytical Chemistry
- Computational Chemistry and Modelling
- Inorganic Chemistry
- Organic Chemistry
- Petrochemistry, Petroleum Engineering

5.3. Earth Sciences

- Geology, Geological Engineering, Geotechnics
- Oceanography
- Tectonics, Seismology

5.4. Mathematics, Statistics

- Algorithms and Complexity
- Mathematical modelling
- Statistical Analysis

5.5. Meteorology / Climatology

- Biosensor
- Moisture sensors
- Temperature monitoring

5.6. Physics

- Acoustics
- Astrophysics / Cosmology
- Laser Technology
- Nuclear Physics
- Physics of Fluids
- Sensors/Multisensor Technology, Instrumentation
- Solid state physics
- Thermodynamics
- Vibration and Acoustic engineering
- Optics



5.7. Mechanical Engineering

- Micro-Mechanics

5.8. Hydraulics

5.9. Separation Technologies

- Filtration and Membrane Processes
- Extraction
- Adsorption
- Distillation
- Sublimation
- Other Processes

5.10. Micro and Nanotechnology related to physical and exact sciences

6. BIOLOGICAL SCIENCES

6.1. Medicine, Human Health

- Biostatistics, Epidemiology
- Care and Health Services
- Clinical Research, Trials
- Cytology, Cancerology, Oncology
- Dentistry / Odontology, Stomatology
- Diagnostics, Diagnosis
- Diseases
- Environmental Medicine, Social Medicine, Sports Medicine
- Gene - DNA Therapy
- Gerontology and Geriatrics
- Heart and blood circulation illnesses
- Electromedical and Medical Equipment
- Medical Research
- Medical Technology / Biomedical Engineering
- Neurology, Brain Research
- Pharmaceutical Products / Drugs
- Physiology
- Surgery
- Virus, Virology / Antibiotics / Bacteriology
- Laboratory Equipment
- Rescue and Emergency Equipment
- Physiotherapy, Orthopaedic Technology
- Single Use Products and Consumer Goods
- Medical Textiles
- Medical Furniture
- Medical Biomaterials



6.2. Biology / Biotechnology

- Biochemistry / Biophysics
- Cellular and Molecular Biology
- Enzymology / Protein Engineering / Fermentation
- Genetic Engineering
- In vitro Testing, Trials
- Microbiology
- Molecular design
- Toxicology

6.3. Genome Research

- Bioinformatics
- Gene Expression, Proteom Research
- Population genetics

6.4. Micro and Nanotechnology related to Biological sciences

7. AGRICULTURE AND MARINE RESOURCES

7.1. Agriculture

- Agriculture Machinery / Technology
- Animal Production / Husbandry
- Biocontrol
- Crop Production
- Horticulture
- Pesticides
- Precision agriculture
- Seed coating
- Veterinary Medicine

7.2. Sylviculture, Forestry, Forest technology

- Forest technology
- Paper Technology
- Pulp Technology
- Sylviculture, Forestry
- Wood Products

7.3. Resources of the Sea, Fisheries

- Aquaculture
- Fish / Fisheries / Fishing Technology
- Marine Science



8. AGROFOOD INDUSTRY

8.1. Technologies for the food industry

- Drink Technology
- Food Additives/Ingredients/Functional Food
- Food Packaging / Handling
- Food Processing
- Food Technology

8.2. Food quality and safety

- Detection and Analysis methods
- Food Microbiology / Toxicology / Quality Control
- Safe production methods
- Traceability of food

8.3. Nutrition and Health

9. MEASUREMENTS AND STANDARDS

9.1. Measurement Tools

- Acoustic Technology related to measurements
- Analyses / Test Facilities and Methods
- Chemical material testing
- Electrical Technology related to measurements
- Mechanical Technology related to measurements
- Optical material testing
- Optical Technology related to measurements
- Other Non Destructive Testing
- Sensor Technology related to measurements
- Thermal material testing

9.2. Amplifier, A/D Transducer

9.3. Electronic measurement systems

9.4. Recording Devices

9.5. Reference Materials

9.6. Standards

- Quality Standards
- Technical Standards



10. PROTECTING MAN AND ENVIRONMENT

10.1. Safety

- Acoustic safety
- Assessment of Risk
- Fire Safety Technology
- Hazardous Materials
- Radiation Protection

10.2. Environment

- Air Pollution / treatment
- Biodiversity
- Ecology
- Environmental Engineering / Technology
- Measurement and Detection of Pollution
- Natural Disasters
- Remote sensing technology
- Soil Pollution
- Water Pollution / Treatment

10.3. Waste Management

- Biotreatment / Compost / Bioconversion
- Incineration and Pyrolysis
- Land and Sea Disposal
- Recycling, Recovery
- Radioactive Waste