

PUBLICATIONS

From the National Academy
of Technologies of France

2011–2020



«Sharing a reasoned, chosen progress»

The mission of the National Academy of Technologies of France is to conduct discussions, formulate proposals and statements on issues relating to technologies and their interaction with society.

The statements and publications of the Academy of Technologies are prepared by 10 clusters:

- Food and health
- Housing/Mobility and Cities
- Education, training, employment and work
- Culture/Recreation
- Energy
- Security and Defence
- Digital
- Industry and services
- The environment and impacts from climate change
- Technologies, economies and societies

Only statements and reports are submitted to the vote of the academics in plenary sessions.

The National Academy of Technologies of France also participates in joint studies and reports with other academies and organizations. It organizes conferences and symposia open to the public, the proceedings of which are reported in this document.

The documents listed in this catalogue are available on the website www.academie-technologies.fr. Most of them can be viewed or downloaded from this site.



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POSITION PAPERS/NOTES

Food and health

- Health food: Scientific Advances and Industrial Implications – MAY 2016
- Regulation of targeted mutagenesis in plant breeding – JULY 2016
- Synthetic biology and industrial (white) biotechnologies – OCTOBER 2012
- Chemicals in our daily environment – OCTOBER 2012

Education, training, employment and work

- The use of English in higher education – MAY 2013
- The introduction of technology in the general education streams of high school – DECEMBER 2012
- The future of University Institutes of Technology (UIT) – MAY 2011
- Validation of prior experience (VPE) – JANUARY 2011

Energy

- Linky smart meters: a new technology in every home: issues and concerns – JUNE 2019
- Trajectories of the 2020-2060 electricity mix: comments by an ADEME study on the future energy mix published on 10 December 2018. National Academy of Technologies of France – JANUARY 2019, 16 p
- Objectives and scope of the Government's Multi-annual Energy Programming. Participants' guide n°59 – MAY 2018
- Modifying the thermal regulations for new buildings to reduce greenhouse gas emissions at least cost – JULY 5, 2017
- Position paper on the law "energy transition for green growth" – JUNE 2015
- Heating networks – DECEMBER 2014
- Thermal regulations 2012, responsible building regulations 2020 and climate – NOVEMBER 2014
- Implementation of the Quota Directive for the period 2013-2020 – MARCH 2011

Environment and climate change impacts

- Biodiversity and regional planning measures: on the local and global level, specificities and generalities – DECEMBER 2015
- Technology and climate change: several solutions for mitigation and adaptation – NOVEMBER 2015

Industry and services

- Evaluation of public technological research – FEBRUARY 2013
- Research-innovation-technology policies in French regions – JULY 2012
- Financing biotechnology start-ups in pharma – SEPTEMBER 2011

Digital

- A robotization strategy for the re-industrialisation of France – JULY 2017
- Strategic challenges for additive manufacturing: positioning of the National Academy of Technologies of France – JUNE 2015

REPORTS

Food and health

- Health food: scientific advances and industrial implications – 2016, 149 p.
- White biotechnology and synthetic biology – EDP SCIENCES, 2015, 99 p.

Education, training, employment and work

- The rise in technological capabilities of SMEs: the case of industrial companies – 2018, 102 p.
- Recommendations for developing and enhancing initial and continued vocational training – 2017, 24 p.
- Approach to the fundamental processes of learning – 2017, 70 p.

- Innovation, growth, employment: digital revolution and employment – 2017, 56 p.
- Industry of the future: from the technical system 4.0 to the social system – 2017, 102 p.
- Vocational education – 2016 (Reprint), 28 p.

Energy

- Oil: reserves, production, and at what price? – DUNOD, 2017, 240 p.
- What reference price for CO₂? – 2017, 44 p.
- Biogas – EDP SCIENCES, 2016, 58 p.
- Impact of ICT on energy consumption worldwide – EDP SCIENCES, 2015, 35 p.

- Methane (CH₄): where it comes from and its impact on our climate – EDP SCIENCES, 2014, 176 p.
- First contribution of the National Academy of Technologies of France to the national energy debate (bilingual version) – EDP SCIENCES, 2013, 57 p.
- Energy vectors: permanent guide-lines for future energy procurement decisions – IE MANUSCRIT, 2012, 214 p.

The environment and impacts from climate change

- Technology and climate change: several solutions for mitigation and adaptation – EDP SCIENCES, 2016, 77 p.

Housing / Mobility and Cities

- Tomorrow's vehicles
– EDP SCIENCES, 2013, 83 p.
- Freight systems
– LE MANUSCRIT, 2012, 226 p.
- Energy efficiency in buildings and housing
– LE MANUSCRIT, 2012, 62 p.

Industry and services

- The renaissance of industry: building competitive ecosystems based on trust and innovation
– EDP SCIENCES, 2014, 107 p.
- Open innovation and SMEs
– 2016, 62 p.

Digital

- Resurgence of artificial intelligence and machine learning
– 2018, 98 p.
- Innovation, growth, employment: the digital revolution and employment
– 2017, 56 p.
- Big data: a change of paradigm
– EDP SCIENCES, 2015, 54 p.
- Impact of ICTs on energy consumption around the world
– EDP SCIENCES, 2015, 35 p.
- Large socio-technical systems
– EDP SCIENCES, 2014, 55 p.

Technologies, economies and societies

- Technologies and Soft power: the case of the fashion and luxury industry
– 2018, 93 p.
- Technologies and innovation territories: four relevant and impertinent reflections
– 2017, 22 p.
- The perception of risk: an issue for science and technology
– 2016.
- Some thoughts about the appropriation of technologies
– EDP SCIENCES, 2015, 102 p.

COMMUNICATIONS

Food and health

- The impact on human health of different sources of electrical energy production: an assessment over the last fifty years
– 2017, 10 p.
- Chemicals in everyday life
– EDP SCIENCES, 2014, 93 p.
- Food, innovation and consumers
– LE MANUSCRIT, 2012, 66 p.

Education, training, employment and work

- Technology, a school of innovative intelligence: for its introduction into the stream of general education at high school
– 2012

Energy

- Exploration of shale hydrocarbon reserves
– PRESS RELEASE, MAY 2011.

The environment and impacts from climate change

- Technology and climate change: solutions for mitigation and adaptation (addendum)
– 2017, 31 p.
- Risks related to manufactured nanoparticles
– LE MANUSCRIT, 2012, 163 p.

Industry and services

- The rebirth of the industry: a selection of analyses
– EDP SCIENCES, 2014, 166 p.

Digital

- The role of technology and practice in informatics education
– 2014
- Towards a technology of consciousness?
– EDP SCIENCES, 2013, 115 p.

- Taking advantage of technological disruptions to gain in competitiveness and innovation capacity: for the development of integrative research?
– 2011, 11 p.

Security and Defence

- Reflections on military robotics
– EDP SCIENCES, 2015, 95 p.

Technologies, economies and societies

- Big data: Ethical Issues
– 2019, 148 p.
- Technologies and innovation territories: four relevant and impertinent reflections
– 2017, 88 p.
- The uses of the precautionary principle
– LE MANUSCRIT, 2011, 60 p.

TEN QUESTIONS TO

Food and health

- Pierre Feillet. How to eat well while respecting the planet and our health?
– EDP SCIENCES, 2016, 149 p.
- Bernard Le Buanec. GMOs
– EDP SCIENCES, 2014, 65 p.

Education, training, employment and work

- Bernard Decomps. Validation of experience acquired
– LE MANUSCRIT, 2012, 100 p.

OUT OF COLLECTION

- Freeing Prometheus: technologies for people
– LE MANUSCRIT, 2011, 256 p.

POSITION PAPERS/STATEMENTS & REPORTS

Food and health

- Agriculture facing its technical challenges: the contribution of technologies. National Academy of Technologies of France, Academy of Agriculture of France. Under the chairmanship of Bernard Le Buanec
– 2019, 215 p.
- Opinion of the National Academies of Agriculture, Medicine, Pharmacy, Science, Technology and Veterinary on the recent publication by G.E. Séralini et al. on the toxicity of a GMO
– OCTOBER 2012

Energy

- For a responsible and rational management of radioactive materials and waste. Participants' guide as part of the public debate on the national plan for the management of radioactive materials and waste. National Academy of Technology of France, French Academy of Sciences
– JUNE 2019

- Nuclear Energy and the Environment: Chinese Academy of Engineering, National Academy of Technologies of France, French Academy of Sciences
– 2019, 105 p.
- Strategy for the use of subsurface resources for the French energy transition: rare metals. Joint report with the French Academy of Sciences
– 2018, 145 p.
- Joint recommendations for the nuclear energy future. Co-operative report with the French Academy of Sciences and the Chinese Academy of Engineering
– 2017, 96 p.
- What is the future for aeronautical biofuels? Joint report with the French Air and Space Academy
– EDP SCIENCES, 2015, 84 p.
- Joint statement on the energy transition in France and Germany, Acatech, Leopoldina, French Academies of Science and Technology
– JUNE 2015.

Industry and services

- The industrialisation of the production of human stem cells for therapeutic use. Joint report with the National Academy of Medicine
– 2018, 60 p.
- Report and recommendations on the implementation in France of new generation sequencing techniques. Joint rapport with the National Academy of Medicine
– 2016, 11 p.

Digital

- The child, the teenager, the family and the screens: a call for reasoned vigilance on digital technologies: French Academy of Sciences, National Academy of Medicine, National Academy of Technologies of France
– 2019, 26 p.
- For an industrial digital policy. White Paper. Academy of Technologies, ANRT, Futuris
– 2018, 31 p.

CONFERENCE PROCEEDINGS, CONTRIBUTIONS

- Contribution of the National Academy of Technologies of France to OPECST Scientific Note No. 19 on satellites and associated services
– 2019, 48 p.
- Contribution of the National Academy of Technologies of France to the preparation of the law on Multi-annual Research Programming
– 2019, 7 p.
- Space transport and reuse. Contribution of the National Academy of Technologies of France to OPECST Scientific Note No. 9 on reusable space launchers
– 2018, 10 p.
- Energy-efficient building renovation. Contribution to OPECST Scientific Note No. 6
– JULY 2018
- Hyper high-speed in-vacuum transport (Hyperloop). Contribution to OPECST Scientific Note No. 5
– JULY 2018.
- (Re)build vocational training: pathways as close as possible to the needs of companies. Minutes of the joint conference with the "Fabrique de l'industrie"
– JANUARY 2017
- Revitalize vocational training and apprenticeship. Conference proceedings
– JANUARY 2016, 61 p.
- Modeling: success and limitations. Proceedings of the joint conference with the CNRS
– 2016, 159 p.
- The patent, a tool for innovation and valorisation: its future in a globalised economy. Proceedings of the joint symposium with the French Academy of Sciences
– 2012, ED. TEC & DOC LAVOISIER, 137 p.

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