

MISSIONS

- Accelerating innovation and growth for industrial companies
- Developing key technologies, shared amongst major industrial sectors (aerospace, automotive, defense, energy, rail industry)
- Providing technological platforms for industrial companies

KEY FIGURES

- 30 M€ of industrial funding
- 30 M€ of government support
- A total budget of 60 M€ including 16 M€ of investments over 4 years
- More than 75 industrial and 15 academic partners

EXPERTISE AND HIGH-LEVEL EQUIPMENT

IRT M2P provides industrial companies access to its technological platforms:

- **Processing of metallic materials:** fully instrumented cold crucible, smelting furnaces, shaping equipment (ingots, sand casting, die casting).
- **Mechanical surface treatment:** pre-pressed shot peening, ...
- **Surface treatment and coating:** chemical and electrolytic conversion, organic, metallic and hybrid coatings, other chemical or electrochemical processes...
- **Thermal and thermochemical treatments:** low pressure carbonizing and nitrocarburizing, nitriding (gaseous and plasma), vacuum heat treatment...
- **Composites:** high speed RTM processes, reactive resins...
- **Mechanical processes for multi-material assembly:** riveting, clinching, nailing, screwing, crimping.
- **Life Cycle Assessment and recycling:** tools and databases for life cycle studies.

Beyond these platforms, IRT M2P also develops strong collaborations with already existing entities (welding processes, thixoforgeage, mechanical tests, characterization ...).

PLATFORMS AVAILABILITY

- Multi-partner research projects with public co-funding
- Research studies/services
- Platform rental with technical support
- Training



Cold crucible



Forging



Composites



Joining



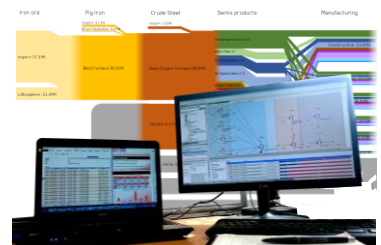
Surface treatment



Shot peening



Thermochemical treatment



LCA

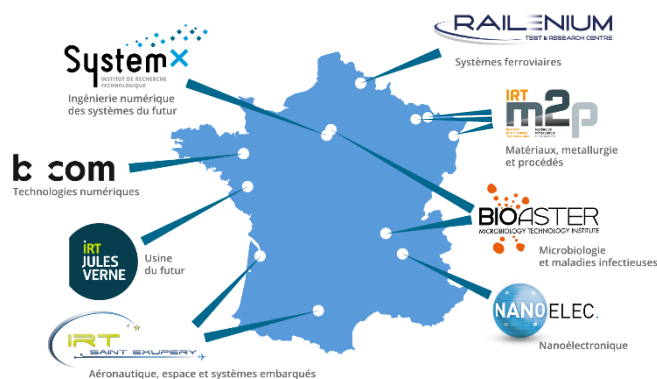
FRENCH INSTUTES OF TECHNOLOGY

The IRTs network brings together the skills of industrial and public research, based on public-private co-investment and partnerships.

The IRTs address various sectors, whose industries coordinate their human and financial efforts to revitalize French industrial competitiveness, with the support of the PIA program.

The IRTs call on the excellency of their academic partners to provide new technological solutions and drive the maturation of technologies. 8 IRTs have been launched since 2010:

- IRT B<>com** - Digital technology - Rennes
- IRT Bioaster** - Infectious diseases, microbiology - Lyon, Paris
- IRT Jules Verne** - Advanced manufacturing - Nantes
- IRT M2P** - Materials, metallurgy and process - Metz
- IRT Nanoelec** - Nanoelectronic - Grenoble
- IRT Railenium** - Railway system - Valenciennes
- IRT SystemX** - Digital engineering of systems - Paris-Saclay
- IRT Saint Exupéry** - Aeronautic, aerospace and embedded systems - Toulouse



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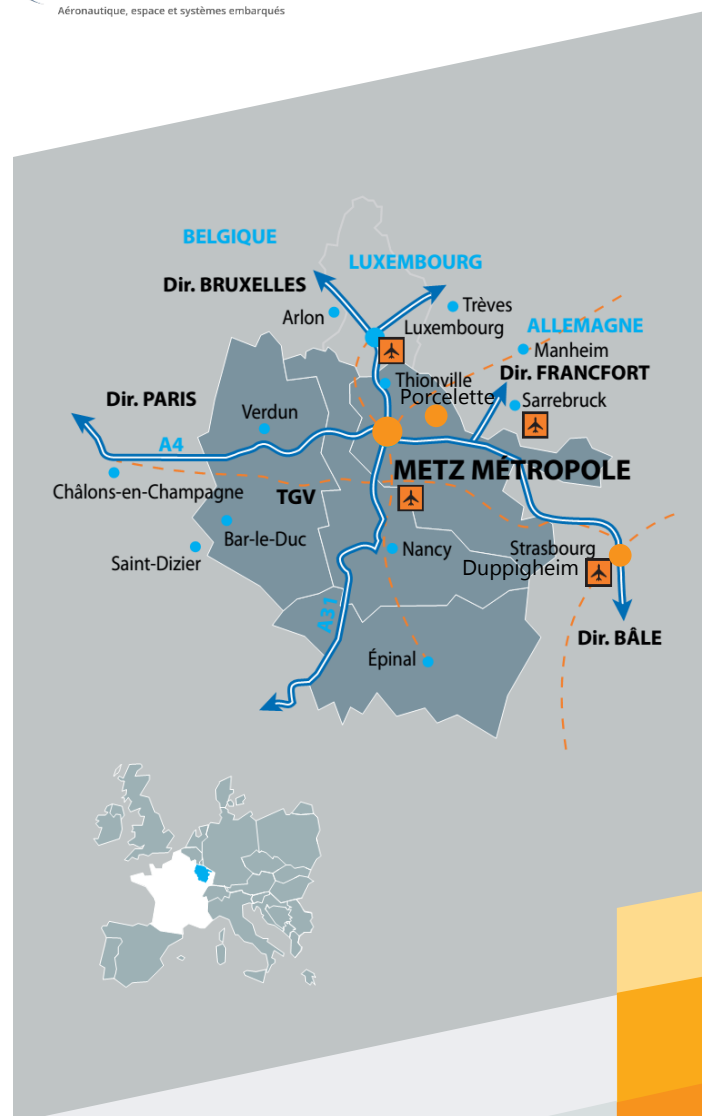
Surface treatment platform

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Composites platform

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