From substrates to device integration: A success story of European Innovation

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About Soitec
Soitec in the value chain

Engineered substrates

Starting wafers

Smart Cut™ technology

SOI substrates (Silicon on Insulator)

SOI processed wafer with multiple raw dice per wafer

SOI transistor

Silicon die with millions of transistors

IC

PCB

Starting wafers

SOI processed wafer with multiple raw dice per wafer

SOI transistor

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Our engineered substrates are at the heart of everyday life.

- **Outstanding Performance**
- **Longer battery life**
- **Higher reliability**
- **Optimized cost**

Soitec’s engineered substrates are used in:
- **Cloud infrastructure**
- **IoT**
- **Automotive**
- **Smartphones**
RF-SOI: European leadership in innovation
RF-SOI Innovation: From R&D to Tech Dev to Mfg
Improving quality of life and creating jobs

Contribution of many organizations and companies
National and European Funding made this possible
and it should not stop there: the next round is 5G
RF-SOI: EU Ecosystem Funding Programs


Application

IP

Technology

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Nanosmart
PMII
AlterBOX
Soitec

REFERENCES
ECSEL RIA
Soitec

ELEMENT5
ECSEL IA
Pilot line Fab 5G
Soitec

Electronic Manufacturing Supply chain
ELEMENT 5 – Full EU Value Chain
FD-SOI: The Ultra Low Power Solution
FD-SOI: EU changing the rules of the game for edge computing, IoT, always-on applications, radars

Public Funding is key for R&D and to mitigate risk

ECSEL are enabling the European Ecosystem Dynamic
FD-SOI: ECSEL Federating the EU Industrial Ecosystem


Application

IP

Technology

Nanosmart PMII UTBOX G1 Soitec

Dynamic ULP CATRENE IP FD-SOI 28nm ST

Reaching 22 CATRENE FD-SOI 28nm ST

EXACT IAN 28nm FD-SOI Soitec

Places 2 be ENIAC FD-SOI >28nm ST

WaytogoFAST ECSEL IA Pilot line 22FDX ST

OCEAN12 ECSEL IA Pilot line 12FDX Soitec

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OCEAN12: covers the whole electronic value chain
Takeaway

ECSEL is instrumental for EU Ecosystem:

› Federates Industry & RTOs/Academia
› Accelerates technology development
› Contributes to EU leadership

ECSEL maximizes the synergy between EU industrial strengths:

› Focus on Industry Ecosystem
› Technology Innovation
› Partnership Industry-RTOs
› Secure Semiconductor EU growth