

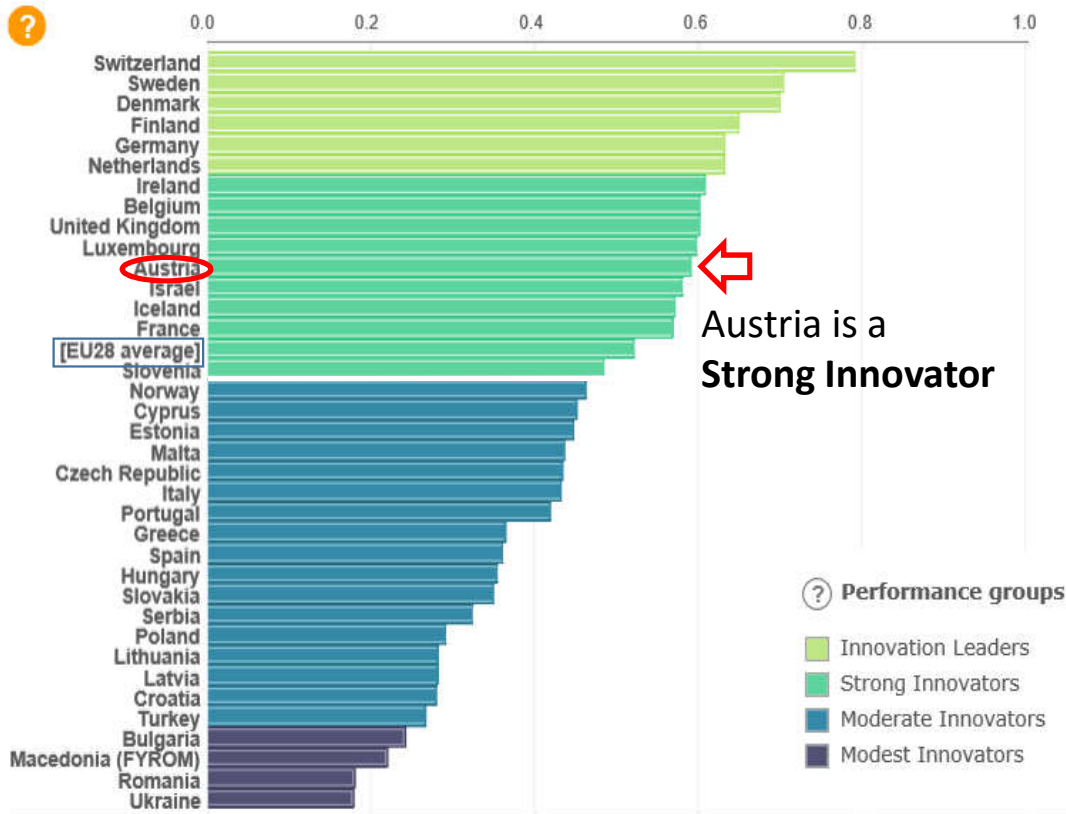


Silicon Austria – Electronic Based Systems for Future Global Competitiveness

Andreas Wild

European Forum Alpbach, 26 August 2016

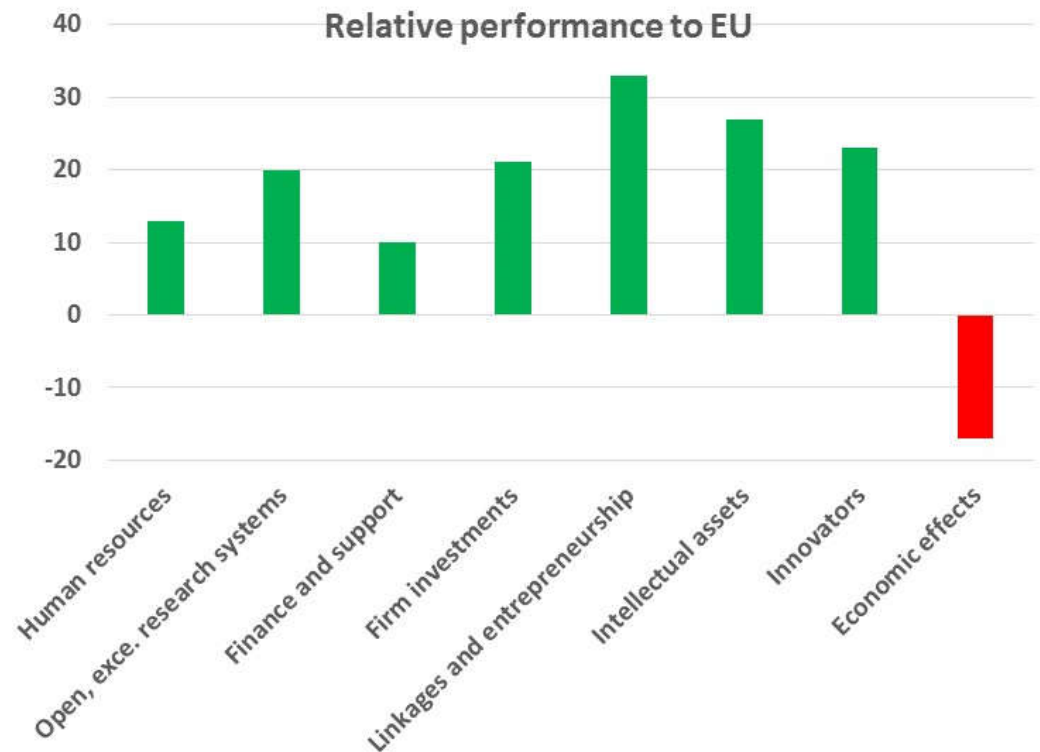
AT Innovation vs. EU



Source: European Innovation Scoreboard 2016

26 Aug 2016

Strongest increases 2008-2015		Significant declines 2008-2015	
International scientific copublications	7.10%	Sales share of new innovations	-4.60%
Community trademarks	3.60%	SMEs with product or process innovations	-4.10%



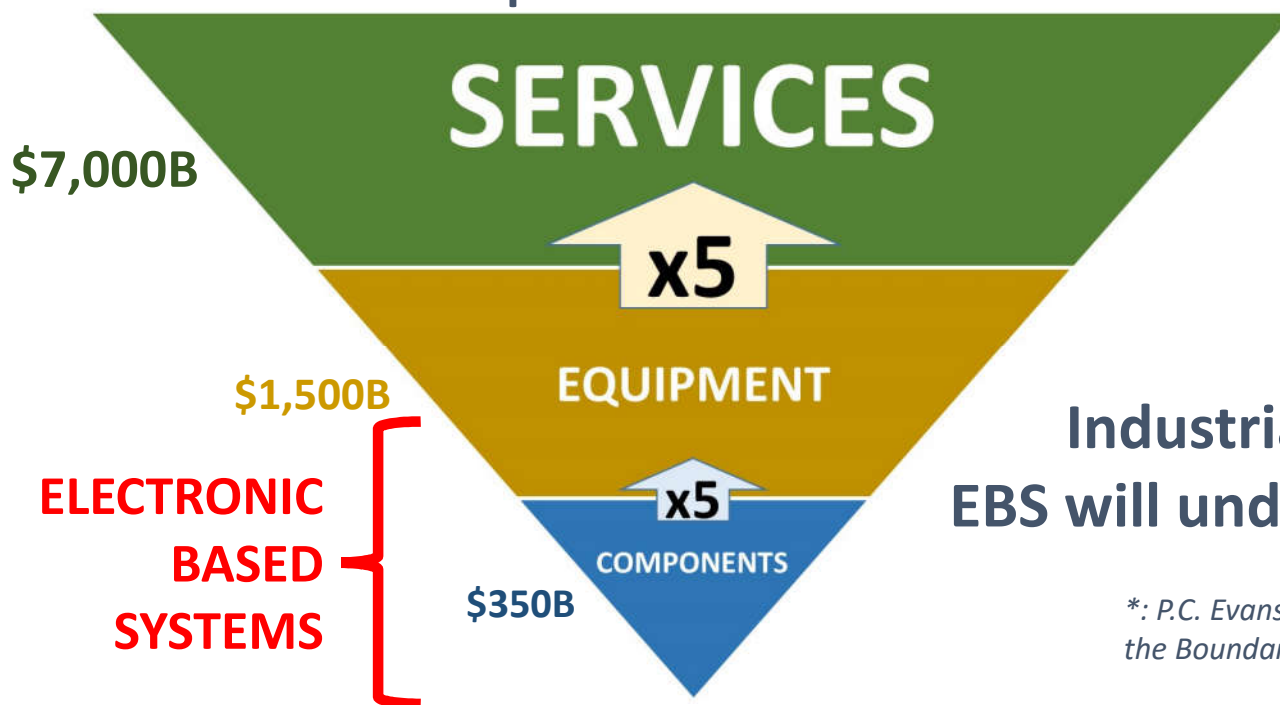
A. Wild, European Forum Alpbach



EBS: a strategic Key Enabling Technology

Today:

EBS underpin ~10% of the World GDP



Information and Communication Technology (ICT) in all industries:

- in Processes
- in Products

Tomorrow* :

Industrial Internet / Industrie 4.0
EBS will underpin ~46% of the World GDP

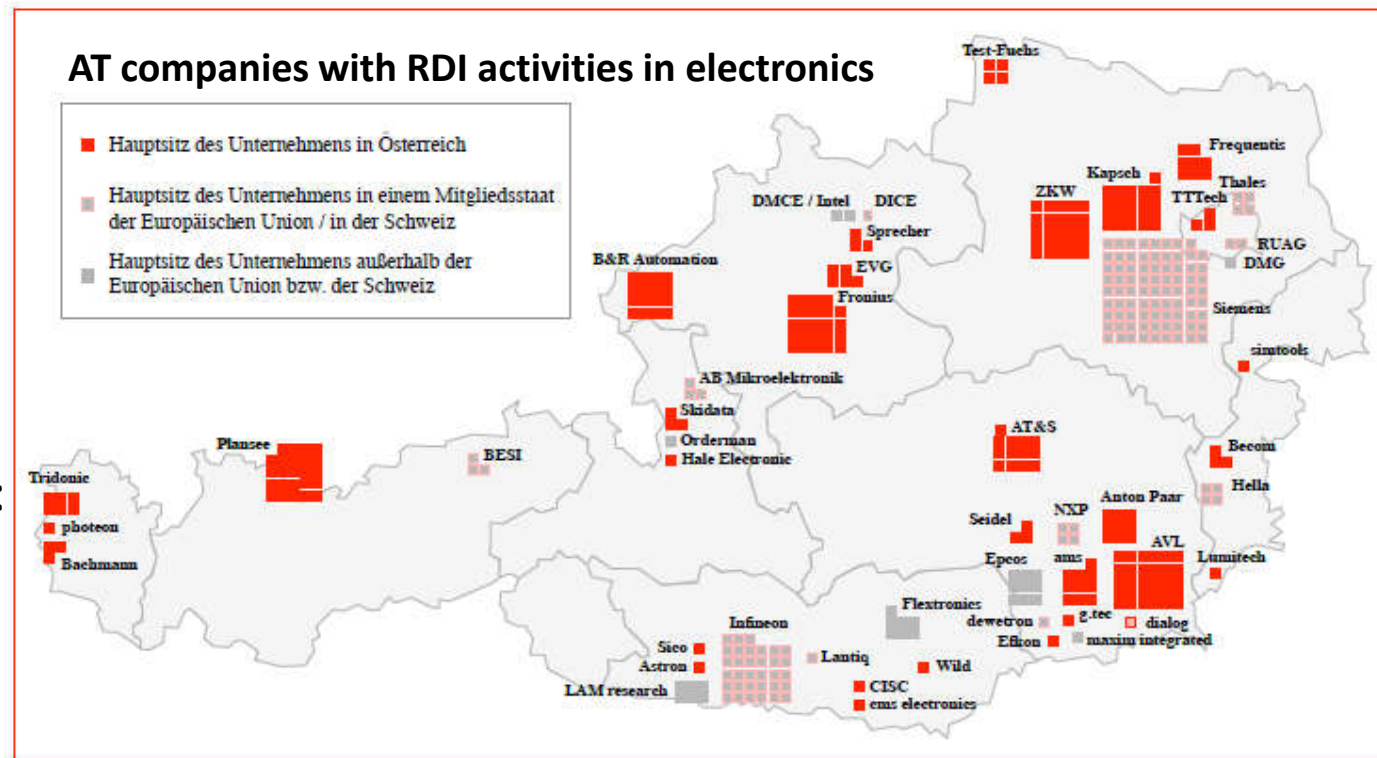
**: P.C. Evans, M. Anunziata, "Industrial Internet: Pushing the Boundaries of Minds and Machines, GE, 2012*

What is Silicon Austria?

An investment programme to establish Austria as a prime location for electronic based systems

Comprehensive studies of the Austrian Research, Development and Innovation (RDI) ecosystem over more than 2 years, involving:

- public institutions
- industrial associations (FEEI, ENIAC/ ARTEMIS/ ECSEL Austria, Photonik...)
- independent market research organizations (JR, Technopolis)



Source: ECSEL Austria, Technopolis 2015

Strengths, Weaknesses, Opportunities and Thrusts - S, O

Strengths

- Leading companies in future-oriented areas
- Components (Sensors, MEMS, Power, RF) + Software + System Integration

→ Enhance strengths

Capitalise on opportunities →

Opportunities

- Build upon strengths
- Strategic position in the value chain
- Restructured innovation ecosystem can reach world class

Strengths, Weaknesses, Opportunities and Thrusts – W, T

Weaknesses

- Fragmentation, sub-critical mass
- Human resources in MINT
- Knowledge transfer into economy

- **World class RTO. Lighthouse projects**
- **Endowment chairs (incl. FH?). Guest professors**
- **Collaboration: Lab Fabs. Start-ups: Maker Spaces
TRL acceleration: Pilot Fabs**

Focus on EBS, especially IoT and I4.0 →

Leverage public/private investments →

International alliances →

Threats

- Dominance of traditional industry
- Excessive import dependence in critical infrastructure and security
- Gaps in the value chain

Silicon Austria: a “Game Changer” for EBS

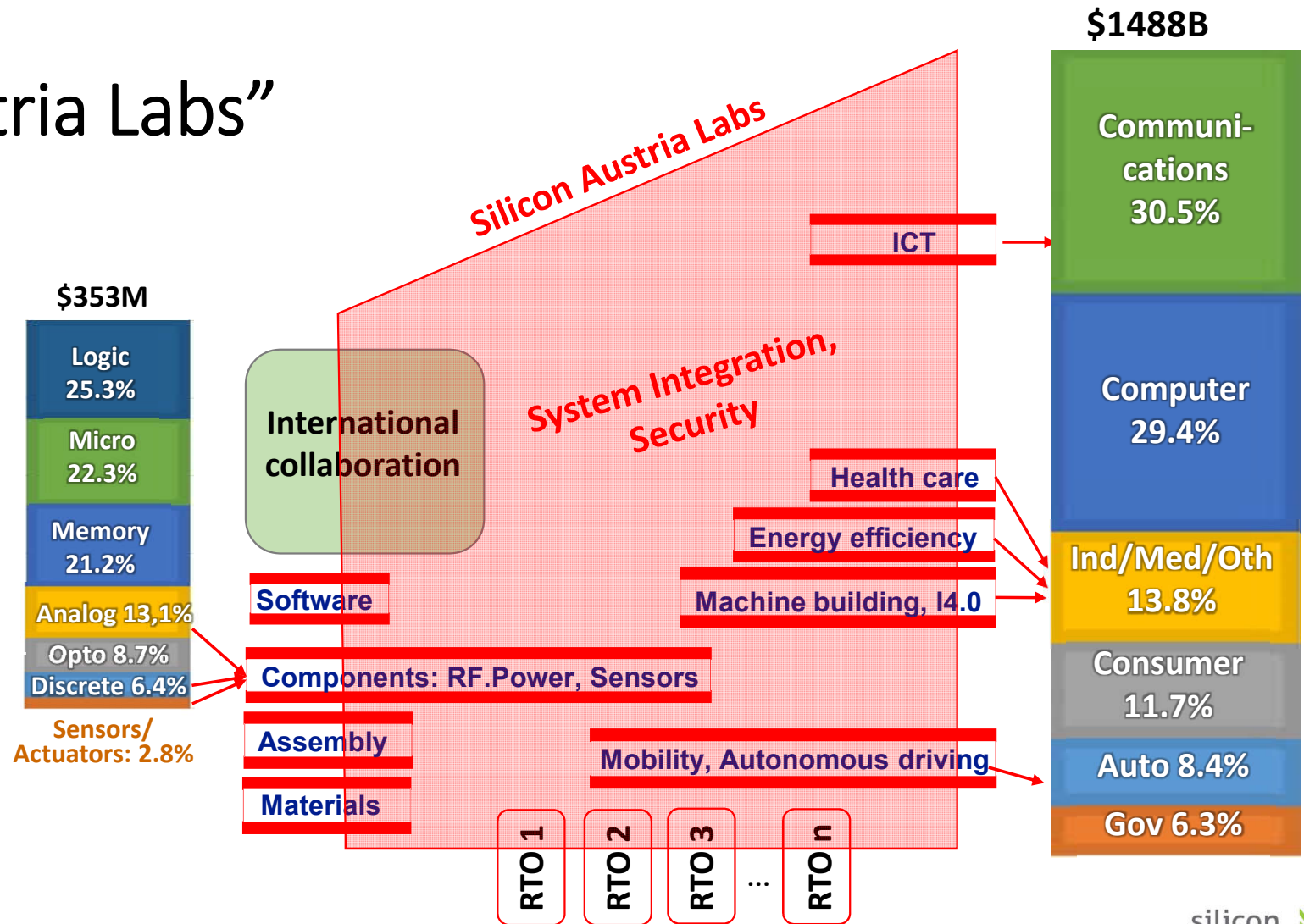
Instrument: ■ Ongoing or ready to go ■ To expand ■ To establish

Action item	Uni	RTO	Industrie
Human resources	<div style="background-color: #90EE90; padding: 2px;">Endowment chairs</div> <div style="background-color: #FFD700; padding: 2px; margin-left: 100px;">FH?</div> <div style="background-color: #FFD700; padding: 2px;">FabLabs (Wien, Graz)</div>		
Structural Improvements		<div style="background-color: #90EE90; padding: 2px;">COMET: Smart Systems Design</div> <div style="background-color: #FF0000; border: 2px solid red; border-radius: 50%; padding: 5px; text-align: center; color: white; font-weight: bold;">New RTO</div>	<div style="background-color: #90EE90; padding: 2px;">- Pilot Fabs (Smart Sensors; RFID, Power, Packaging)</div> <div style="background-color: #FFD700; padding: 2px;">Maker Spaces</div>
Cluster	<div style="display: flex; justify-content: space-between; align-items: center;"> Cross-regional Cluster (Silicon Alps) </div>		
Strategic Projects	Lighthouse projects		
Foundations, VCs	- Pitching Fairs, Start-ups, Bank guarantees		



“Silicon Austria Labs”

- Shall build on strengths
- Complementary to existing RTOs
- International visibility and recognition
- Capable to grow
- Leverage all investment sources
- Not limited in time



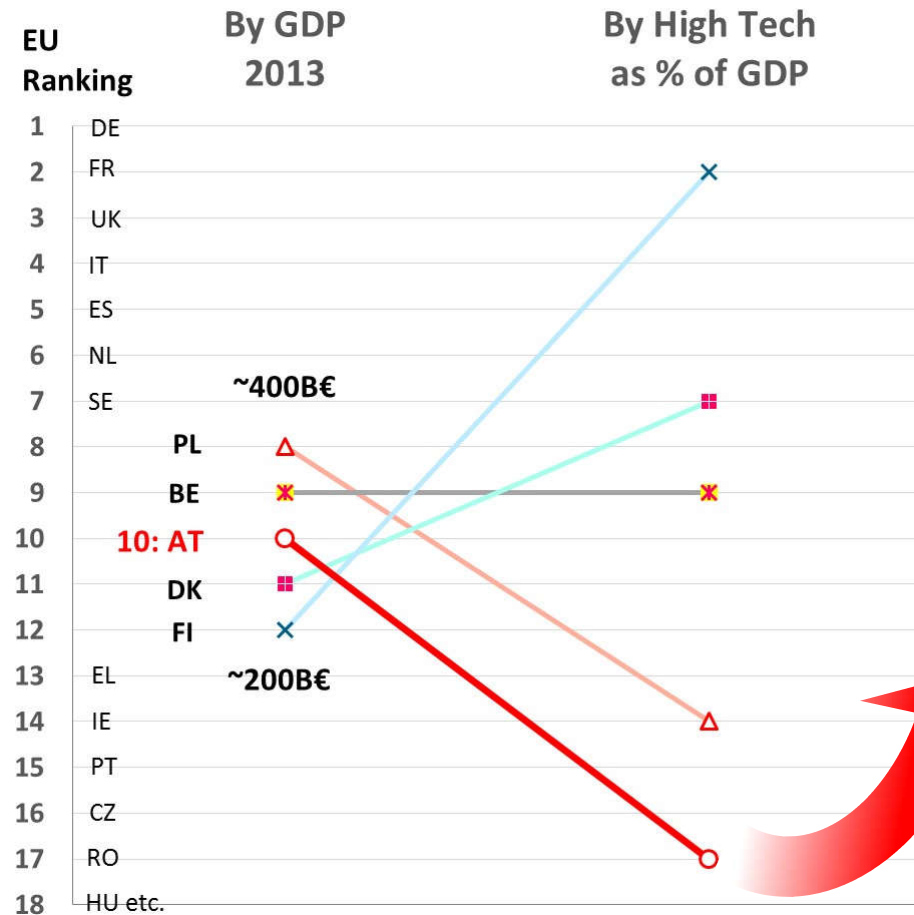
Silicon Austria Leverage Effect

- The bmvit* contribution represents **~23.5% of the total RDI costs**
- In EBS the RDI costs represent **~13% of the economic activity**



Leverage towards GDP:
 $1/23.5\%/13\% = 33x$

*: Austrian Ministry for Transport, Innovation and Technology



Thank you for your attention!



Backup

26 Aug 2016

A. Wild, European Forum Alpbach



EbS Wertschöpfungskette



AT-Profil:

36% Software, services: Keine großen Anbieter; viele Verwender, Nischenanbieter

50% Produktion: der Schwerpunkt liegt in der Herstellung bzw. Produktion

13% Forschung: F&E-Quote von 13%, z.T. 25%; AT Durchschnitt in 2015: 3%

Hebelwirkung: ~1 zu 7 !

Nach: "Electronic Based Systems. Die technologischen Helden der Zukunft", FEEI/bmvit, 2016