FROM OPEN SOURCE PROJECT TO INDUSTRIAL SOLUTION: THE ROLE OF PAPYRUS IC

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OUTLINE

- OPEN SOURCE IS NECESSARY, … BUT NOT SUFFICIENT
- ROLE OF INDUSTRY CONSORTIUM
- PAPYRUS IC
- FUTURE CHALLENGES
- SUMMARY

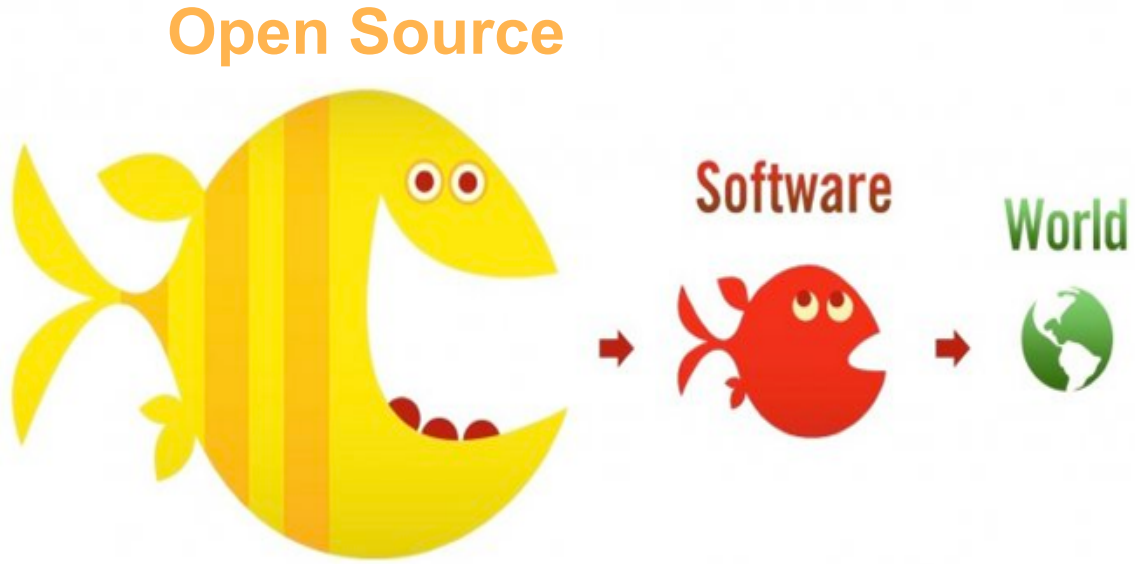
SW IS EATING THE WORLD
… OPEN SOURCE IS EATING THE SW WORLD

Market for highly specialized modelling tools starts to collapse.

Tool vendor development investments shrinks or stops. No velocity on new features.

At Ericsson, “Work-in-progress” open source tools are favored.

Company strategy veers towards favoring open source tools.



OPEN SOURCE IS A NECESSARY CONDITION!

- ☑ Open technologies
- ☑ Much simplified legal and business context
- ☑ Enables fruitful collaborations and tech transfer

- ☑ No vendor lock-in
- ☑ Ability to independently develop required capabilities
- ☑ Possibility to use same tool/ technology for both industrial development and research

ECLIPSE AND PAPYRUS PROVIDE THE BASIS

- ☑ Open technologies
- ☑ Much simplified legal and business context
- ☑ Enables fruitful collaborations and tech transfer

- ☑ No vendor lock-in
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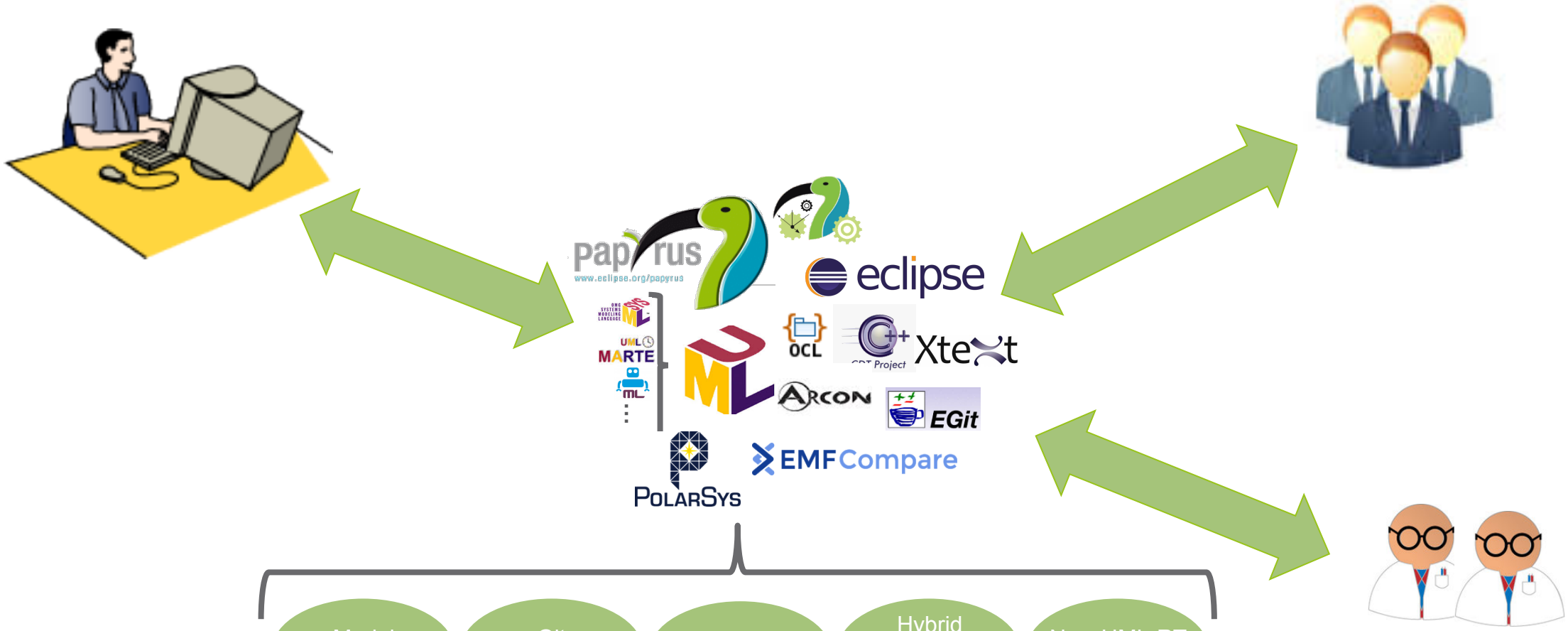
PROVIDES THE FLEXIBILITY WE NEED TO DEVELOP KEY REQUIRED CAPABILITIES



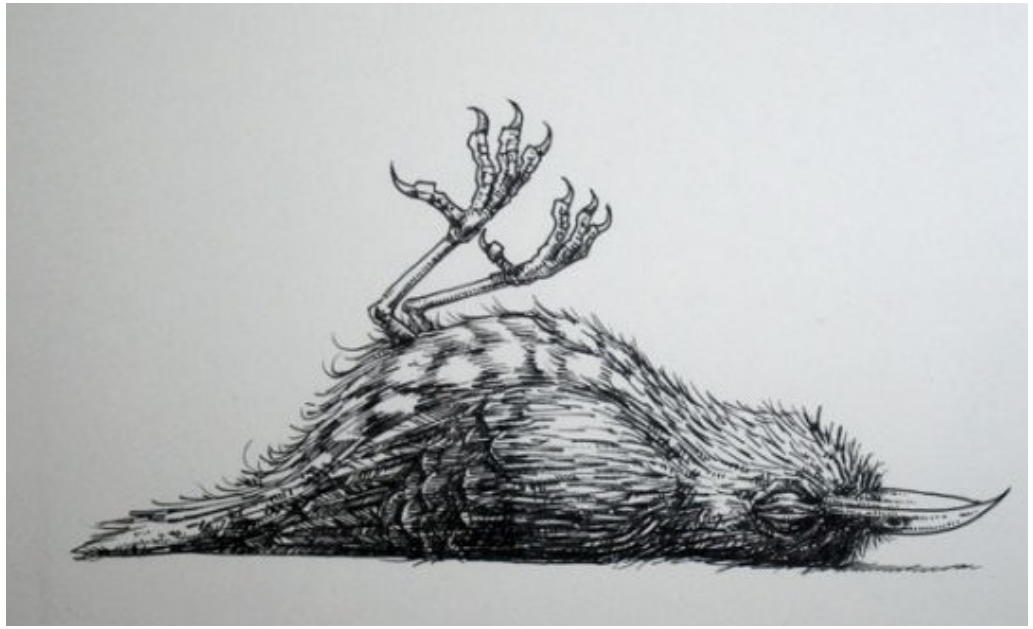
… BUT OPEN SOURCE IS NOT SUFFCIENT!

Open source projects by themselves don't provide the required level of industrialness

- No industrial product management
- No real product roadmap
- Difficult to achieve the required level of quality, stability, and usability – 80% is not good enough!
- No long-term commitment

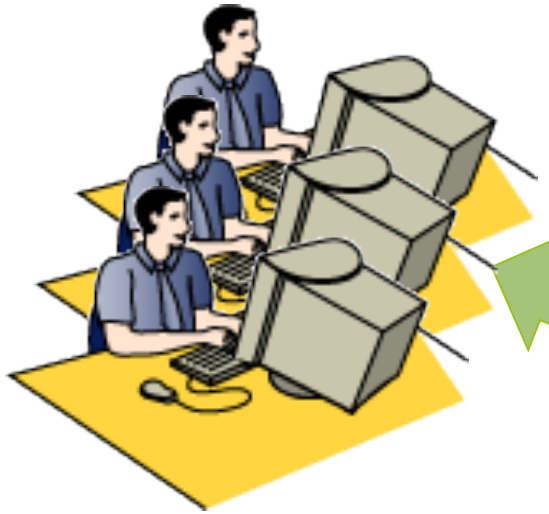
Industrial deployment requires

- Governance
- Industrial project/product management
- Product roadmap
- Requirements management
- Long-term availability/evolution
- Joint-development financing
- Commercial support



Goal: Define strategy to ensure the long-term availability/evolution of Papyrus

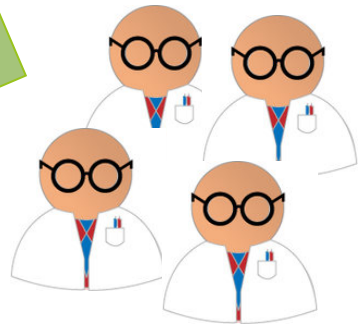
WE ALSO NEED A VIBRANT COMMUNITY!



- ☑ Industrial project/product management
- ☑ Commercial product offerings
- ☑ Consulting services

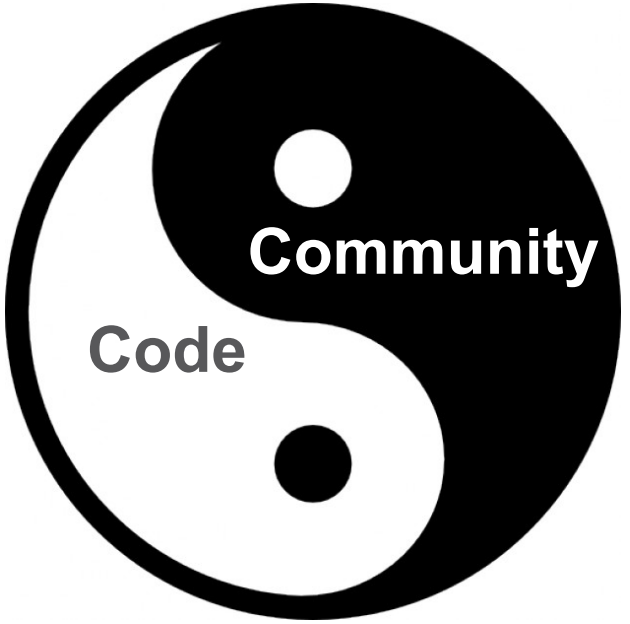
papyrus
www.eclipse.org/papyrus
eclipse
UML MARTE
OCL
C++ Project
Xtext
ARCON
EGit
EMFCompare
PolarSys

Model Diff/Merge | Git Integration | DSL and Customization | Hybrid Textual/Graphical Modeling | New UML-RT Runtime



MAIN CHALLENGE: DEVELOPMENT OF THE COMMUNITY

- End-user driven
  - Need strong leadership from end-user companies
- Strong supplier ecosystem
  - Need to ensure financial success of the suppliers
- Attract leaders from researcher community
- Establish Papyrus as main tool for MBE education/training
- Grow the number of contributors/committers
- Foster contributions from all participants
- Establish clear governance



PAPYRUS IC

› Eclipse Polarsys IC founded in Jan 2016 – https://wiki.polarsys.org/Papyrus_IC

› User Lead members

› Supplier Lead members

› Participant members

MISSION/VISION

WHAT it does

Develop a **customizable and extensible industrial-grade open source MBE tool suite** based on the Papyrus/Eclipse platform, other key open source technologies, and leading industry standards

WHO it does it for

For companies developing software-based systems, from **Enterprise Software** to **Internet of Things (IoT)** and **Cyber-Physical Systems (CPS)**

HOW it does what it does

By fostering and leveraging collaborations between members of a **vibrant community** composed of **end-users**, **suppliers**, and **research/academia**

OVERALL GOALS

- Development of industrial-grade open source solution
- Joint development financing
- Knowledge sharing
- Promotion of open source solution
- Development of the community
- Standardization
- Collaboration on research projects
- Contribution to MBE education and training

KEY CHALLENGES

- Company culture
  - Culture change – migration to open source requires a real culture change
- Community
  - Provide the required infrastructure to enable the growth of the community
  - Industry Consortium to lead/govern the development of Papyrus open source solution
- Product management/Governance
  - Manage requirements and priorities
  - Ensure delivery of top industrial-grade solution
- Papyrus to support a broad range of customizations and DSMLs
  - Manage Papyrus solutions/products as a product line
  - Ensure that we don’t create a set of divergent products

Open source is not free, it requires involvement and investment

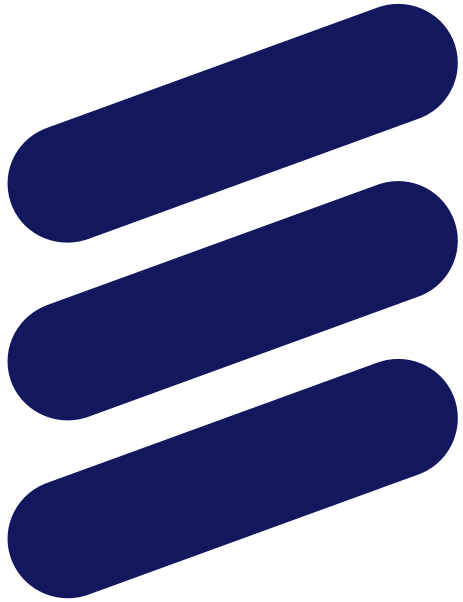
Unfortunately, it is not a silver bullet!

SUMMARY

- Ericsson has been using MBE at a large scale for over 20 years
- Lots of benefits, but proprietary tools are a main issue
- Open source tools are needed, … but not sufficient by themselves!
- A vibrant and extensive end-user driven community is required
- Industry Consortiums are needed to provide the required governance and industrial product/project management

Success is the only option!

There is no alternative!



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