Modelado Foundation

A non-profit organization in service of the Computational Science and Engineering Community
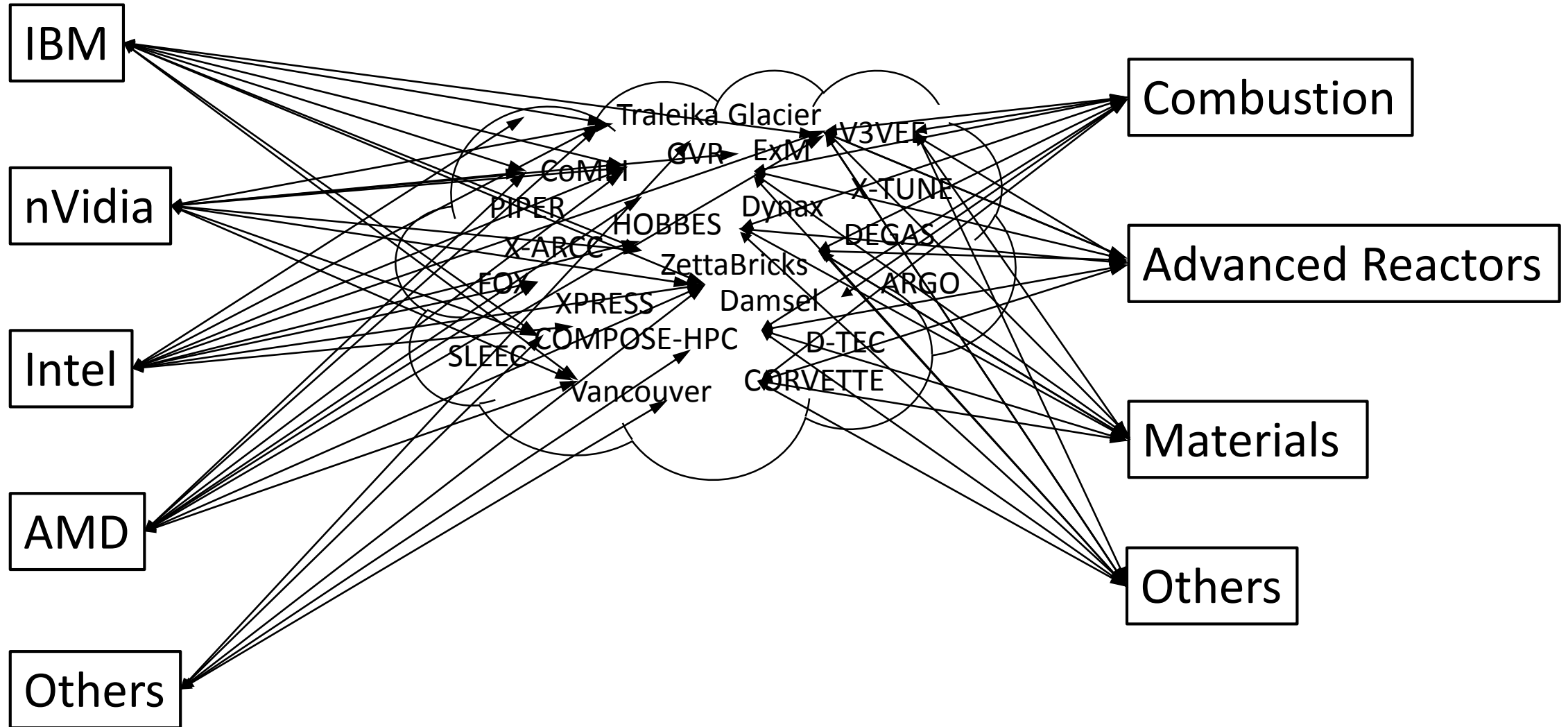http://modelado.org or http://modelado.foundation

Modelado Objectives

- Community Development

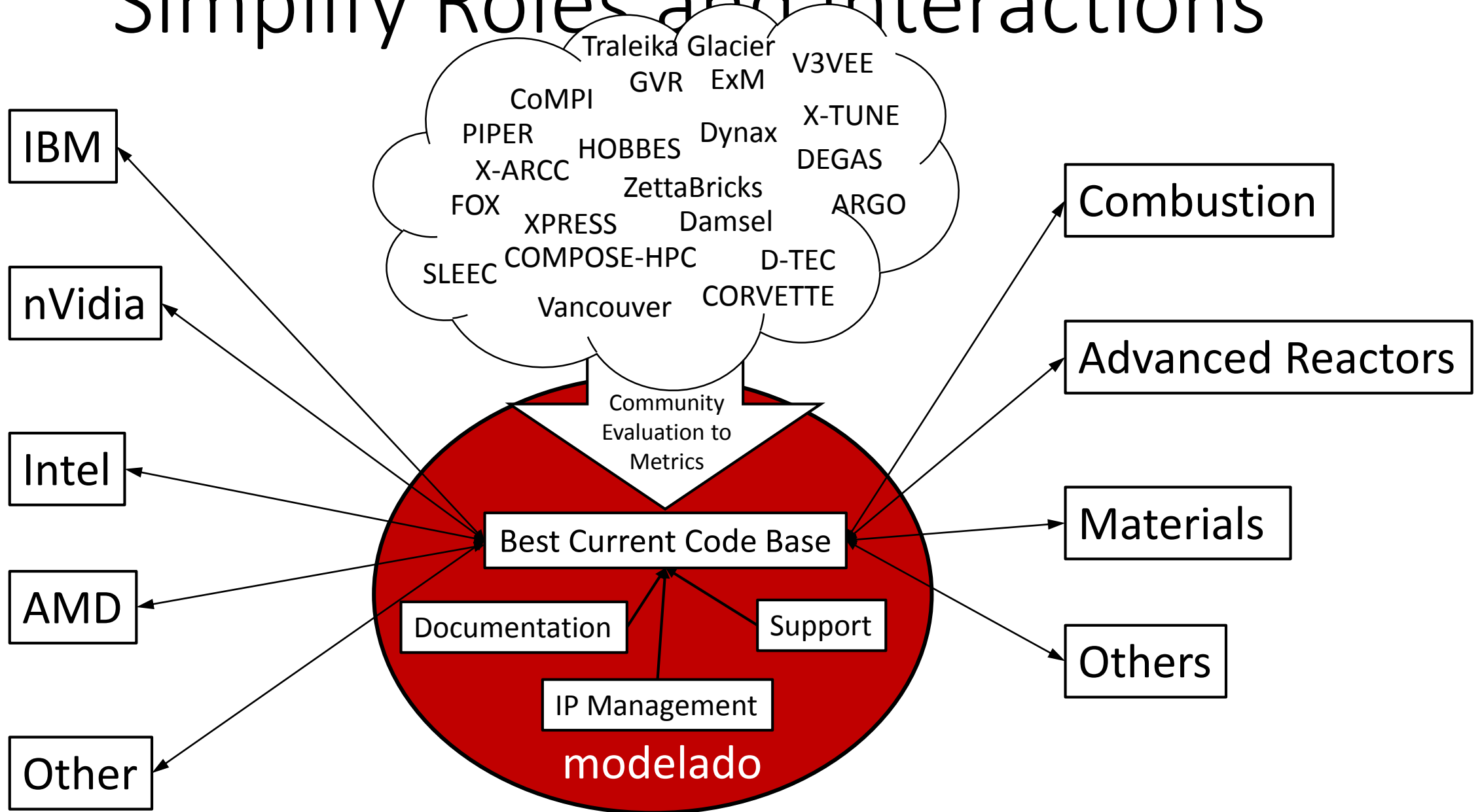- Release Engineering

- Intellectual Property Management

Community Development

- Open Source Development Process
- Setting Objectives and Metrics
- Websites and community tools
- Meetings and workshops
- Project Mentoring, Education and Training

Community Complexity
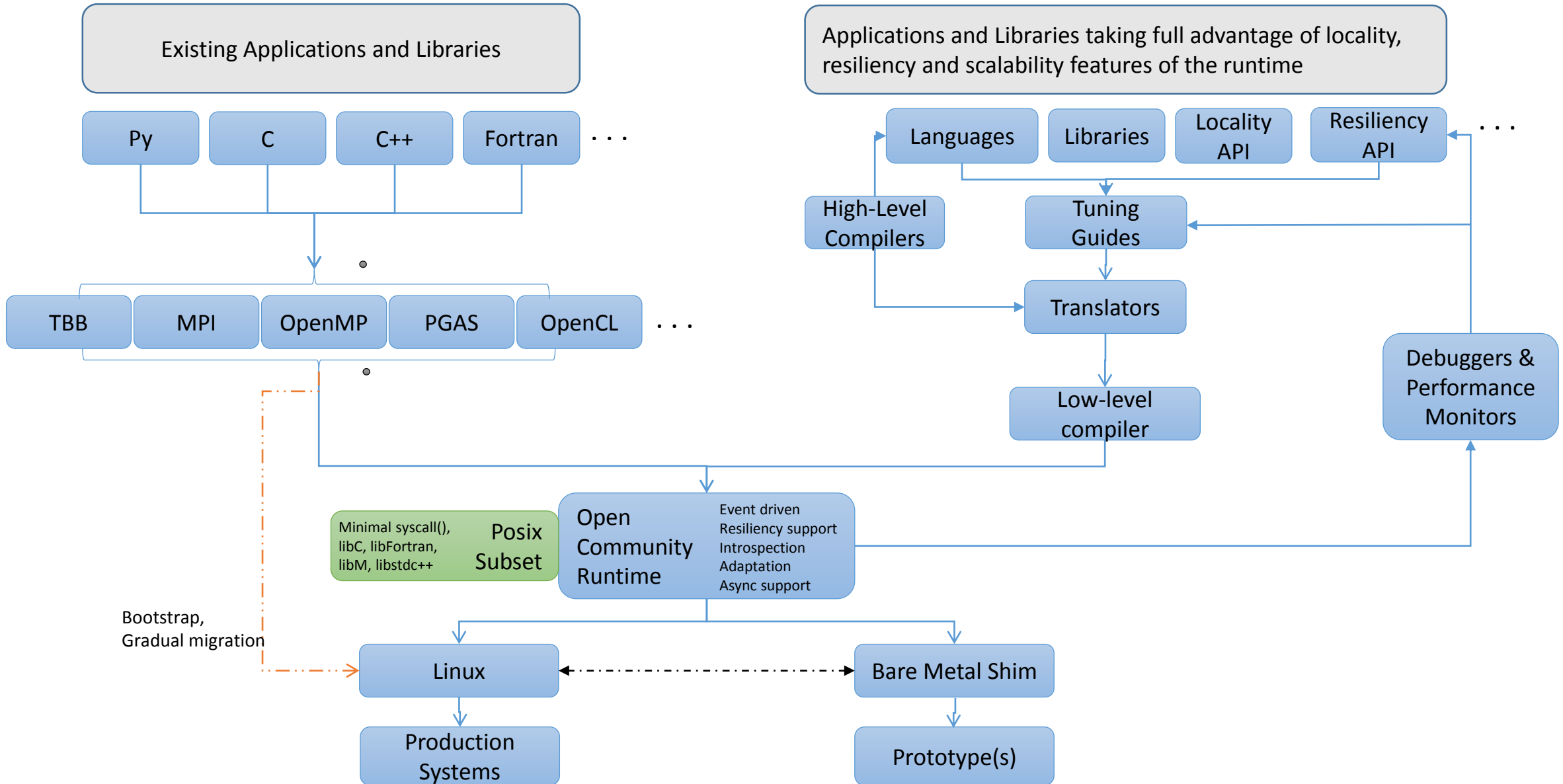
Simplify Roles and Interactions

Modelado Objectives

- Community Development

- Release Engineering

- Intellectual Property Management

Release Engineering

- Provision - Build/Test/Deploy/Install/Update

- Maintenance and Support

- Distribution Creation and Support

- Simultaneous Multi-Project Release (e.g Eclipse Luna)

  - Target First November 2014

Simplified Application and Software Vision

Existing Applications and Libraries

Py · C · C++ · Fortran · · ·

TBB · MPI · OpenMP · PGAS · OpenCL · · ·

Applications and Libraries taking full advantage of locality, resiliency and scalability features of the runtime

Languages · Libraries · Locality API · Resiliency API · · ·

High-Level Compilers

Tuning Guides

Translators

Low-level compiler

Debuggers & Performance Monitors

Minimal syscall(), libC, libFortran, libM, libstdc++ Posix Subset

Open Community Runtime

Event driven
Resiliency support
Introspection
Adaptation
Async support

Bootstrap, Gradual migration

Linux

Bare Metal Shim

Production Systems

Prototype(s)

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Intellectual Property

- Licensing
- Copyright
- Patent
- Key: Ecosystem-wide Consistency and Predictability
- Assure IP approach works for
  - Commercial products
  - Non-commercial efforts
  - Research and Development

Build on Experience – Community 2.0

Learn from the best Eclipse, Apache, LINUX, Mozilla
- Building the community/ecosystem is top priority
- Support multiple projects and give them autonomy
- Support Regular Community Interaction
- Long-term commitment to quality

Avoid the pitfalls
- Tragedy of the Commons
- Governance and Loss of Community Management
- Maintain Community Innovation (with large user/installed base)