

Our number one priority

Safety first



Emergency exit



Assembly point



Protective equipment



Emergency number



First aid kit



In case of emergency



Psychological safety



Health and well-being



Digital security



High performance computing at Sandvik Coromant

what we do today and our needs for the future

Erik Holmström
ENCCS KTH days

Technology Area Material & Process development:

- Powder & Raw Materials
- Carbide & Sintering
- CVD
- PVD
- Edges & Surfaces
- Grinding
- Materials Characterization
- Materials Modeling





SANDVIK



The Sandvik Group conducts operations in three business areas.



Sandvik Mining and Rock Solutions

Revenues 56,843 million SEK
Employees 16,206



Sandvik Manufacturing and Machining Solutions

Revenues 45,901 million SEK
Employees 20,802



Sandvik Rock Processing Solutions

Revenues 9,587 million SEK
Employees 2,919



Cutting tools

SANDVIK
coromant

Sandvik Manufacturing and Machining Solutions

Cutting tools

 **Seco**

Cutting tools

 **WALTER**

Cutting tools

DORMER PRAMET

Mining and Tungsten powder

wolfram



Quick facts

Number of employees

Headquarters in Sandviken, Sweden

8.300

Number of patents

1.700

Sandvik Coromant Centers

Sales countries around the globe

150

Innovations – Number of new products yearly



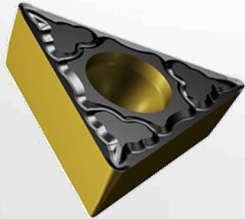
2.500

Delivery time on standard tools

24h



This is Sandvik Coromant





The Modeling Team



Aayush Sharma
R&D Engineer
Material Modeling



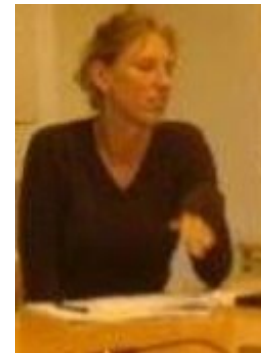
Jonathan Chico
Senior R&D
Professional
Material Modeling



Adam Johns
Senior R&D Engineer



Martina Lattemann
Principal R&D Engineer
Technology Area Manager
Material Modeling

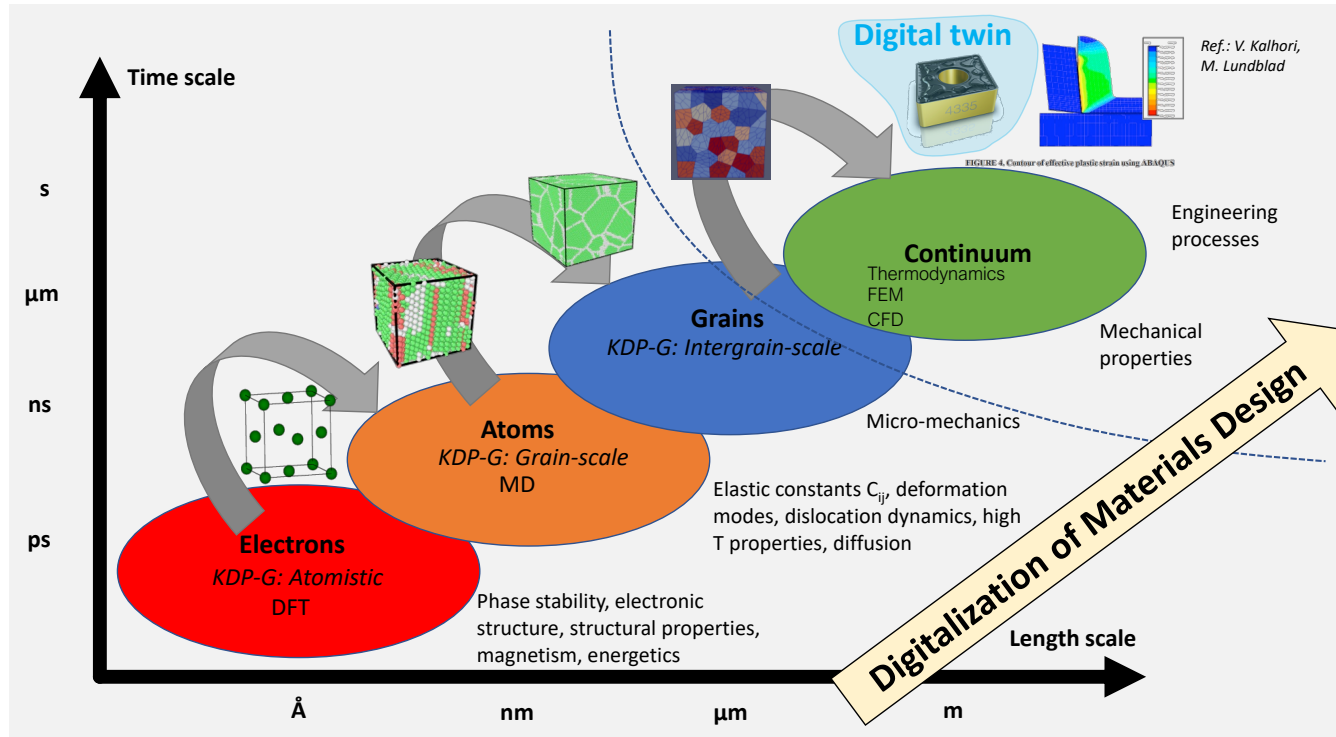


Martina Levin
Manager
Materials Design
and Modeling

Digital Materials Design



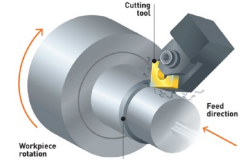
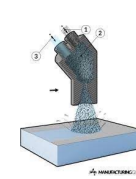
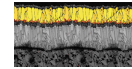
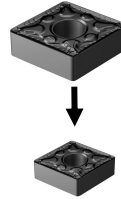
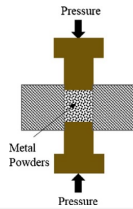
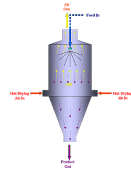
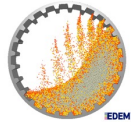
- Knowledge building (specialized competence)
- Integration in data buildup (useful by all)



R & D at Coromant



R & D at Coromant



Raw material

Milling

Drying

Pressing

Sintering

Honing

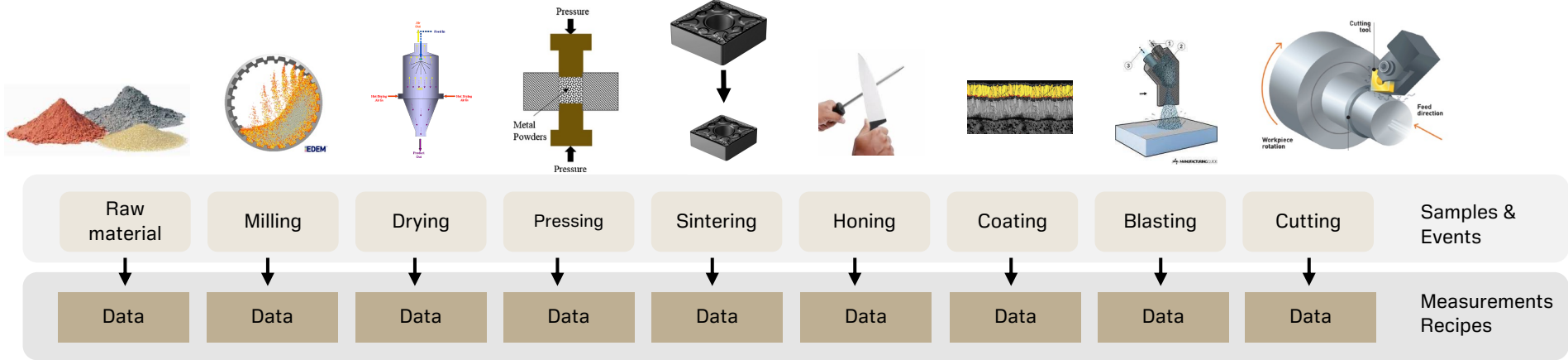
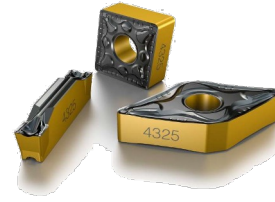
Coating

Blasting

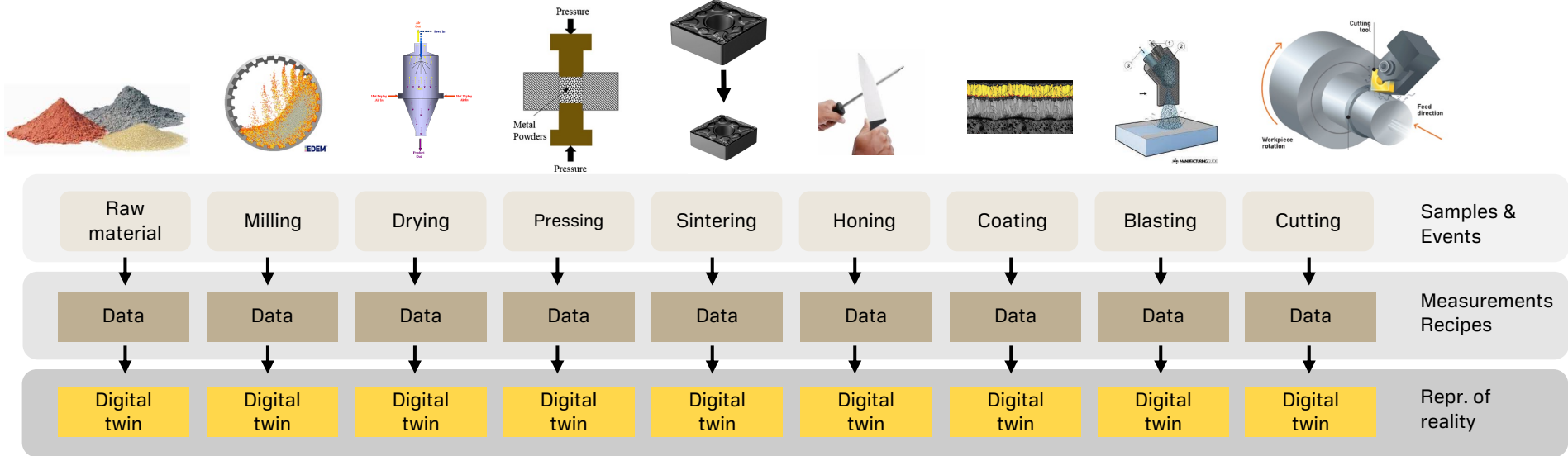
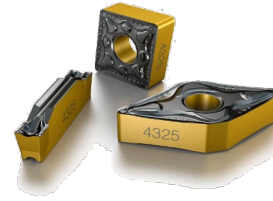
Cutting

Samples & Events

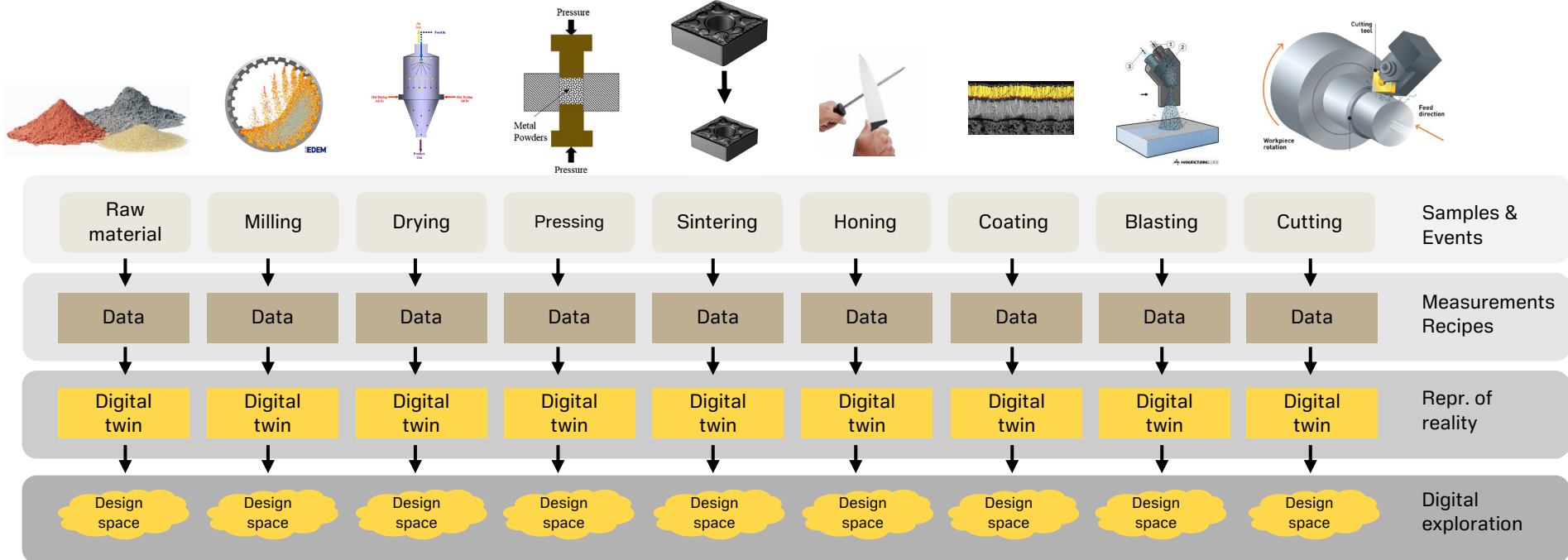
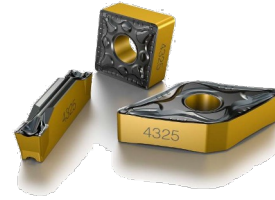
R & D at Coromant



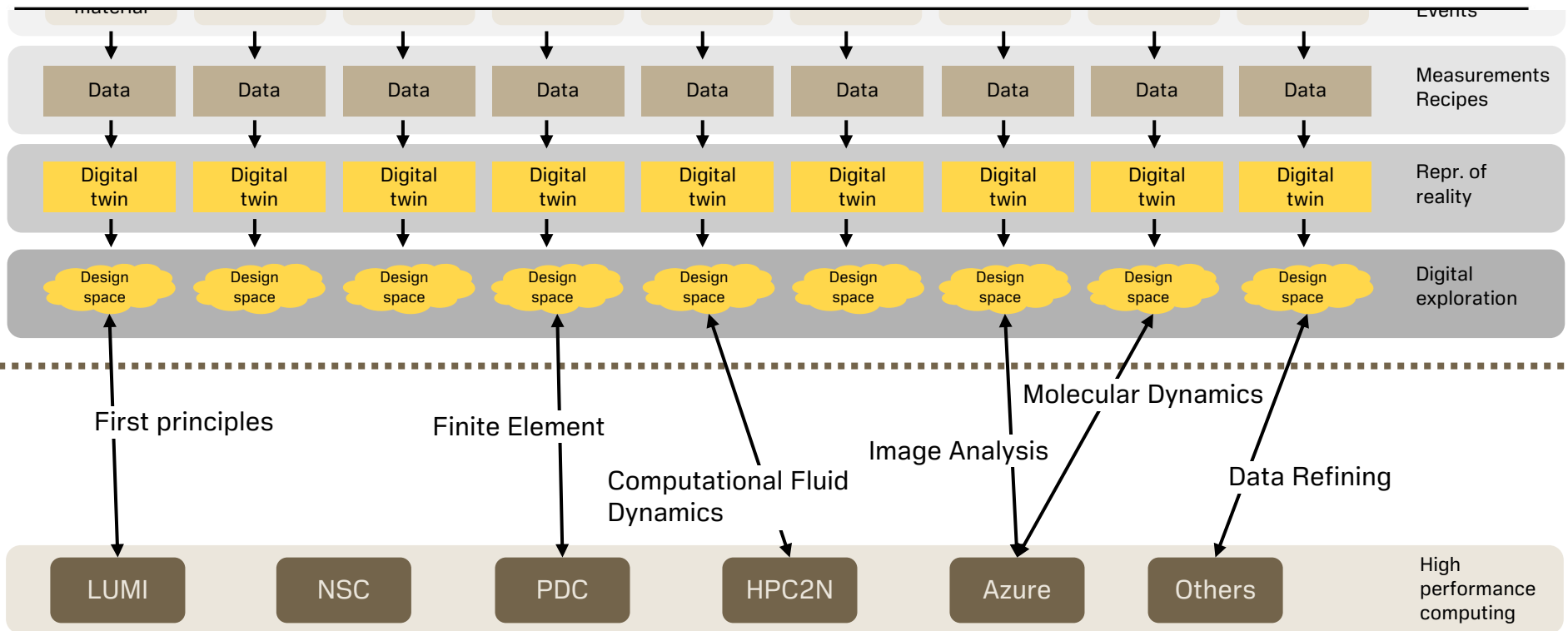
R & D at Coromant



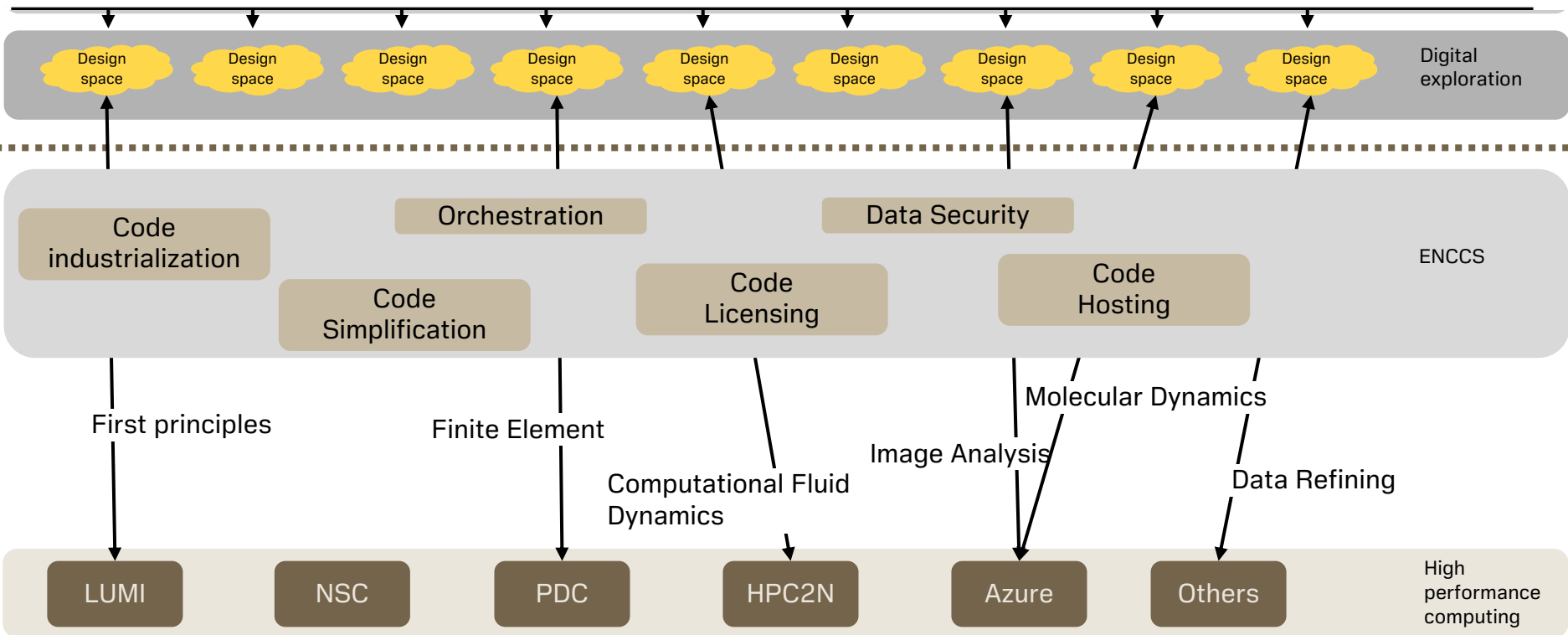
R & D at Coromant



R & D at Coromant



R & D at Coromant



Support Areas

A list of identified needs of support to make optimal use of large-scale supercomputing infrastructure:

Code industrialization:

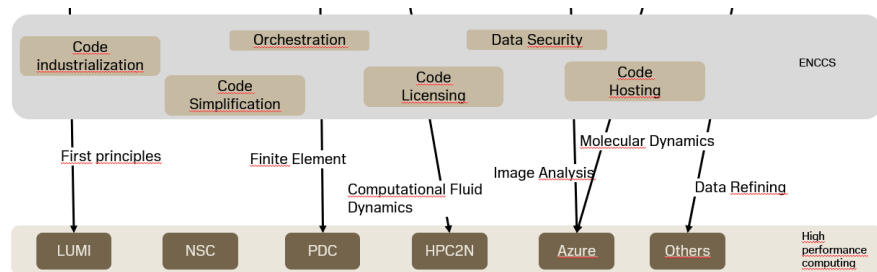
- Robustness (exit codes, etc.)
- Low frequency updates fork
- Database integration

Simplification:

- User interface
- Routine workflows
- Plug-and-play setup

Orchestration:

- Hardware independence
- Interface to internal data storage
- Automation and bookkeeping of batch runs



Code licensing:

- Portfolio management
- License package deals

Data security:

- Prevent exposure of resource use
- Clarify and inform how public access to information applies
- Handling of new/changed threats to data security

Code hosting:

- Handle industrialized ports of scientific codes
- Optimization
- Reimbursements to creators (Spotify for HPC codes!?)

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