Revolutionary gear of the 21st century...

...coming soon



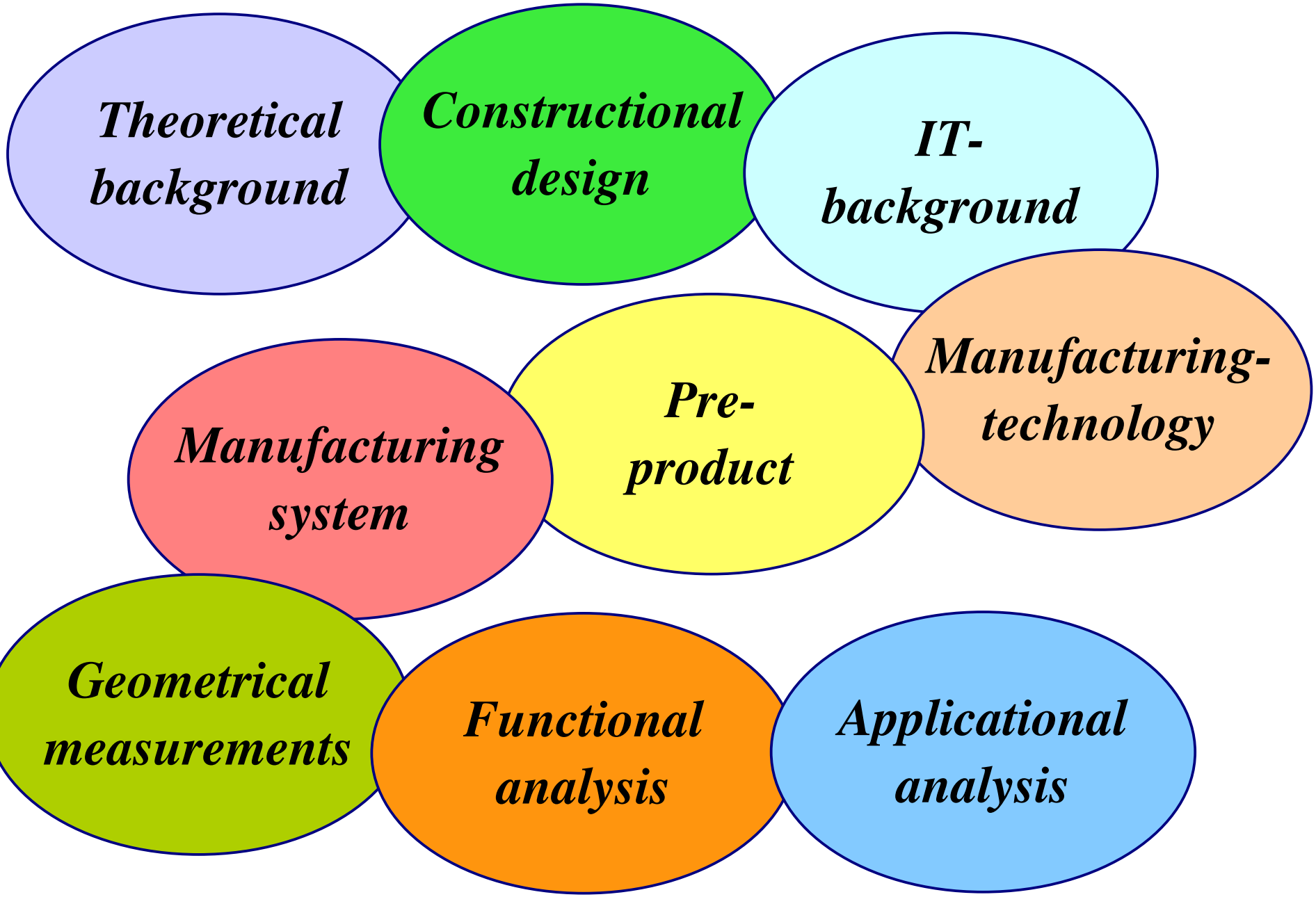
info@dldh.hu, www.dldh.hu

easiTAP consortium

- Armines
- Cerobear GmbH
- Direct-Line Ltd.
- Hembrug Machine Tools
- IMIX vision support systems B.V.
- IPT - Fraunhofer Institute
- Mössner Diamantwerkzeuge GmbH
- Torman Ltd. Sri.
- WZL - RWTH Aachen



The agenda


Theoretical background
Constructional design
IT-background
Manufacturing-technology
Pre-product
Manufacturing system
Geometrical measurements
Functional analysis
Applicational analysis

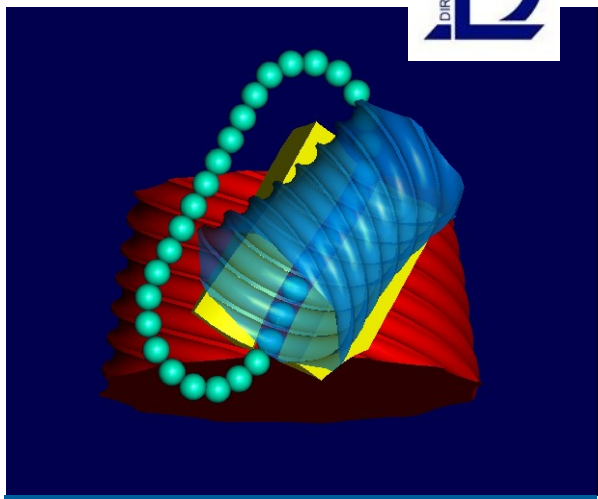
Theoretical background

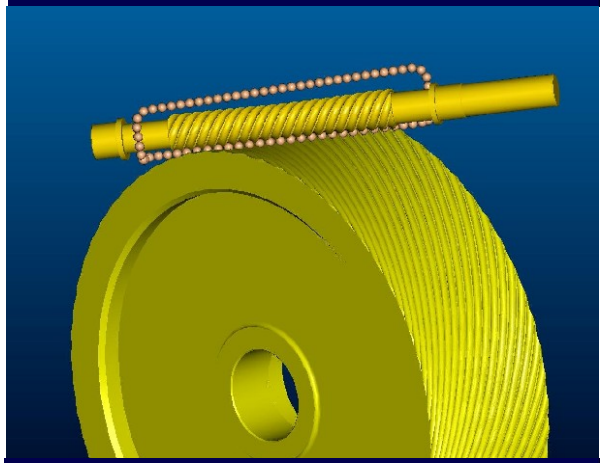
- *Pure rolling*
- *Differential equations*
- *Geometry*

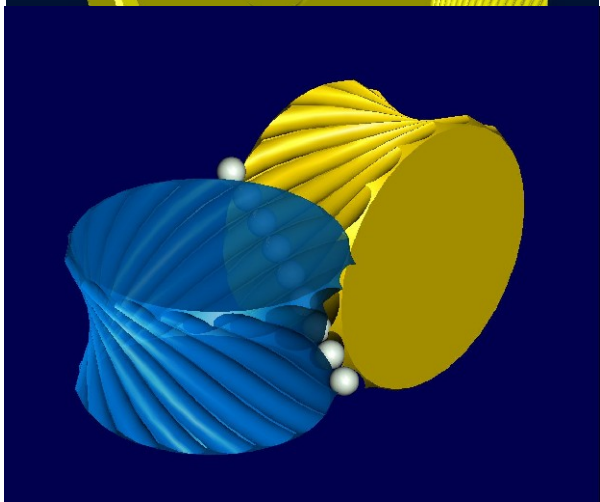


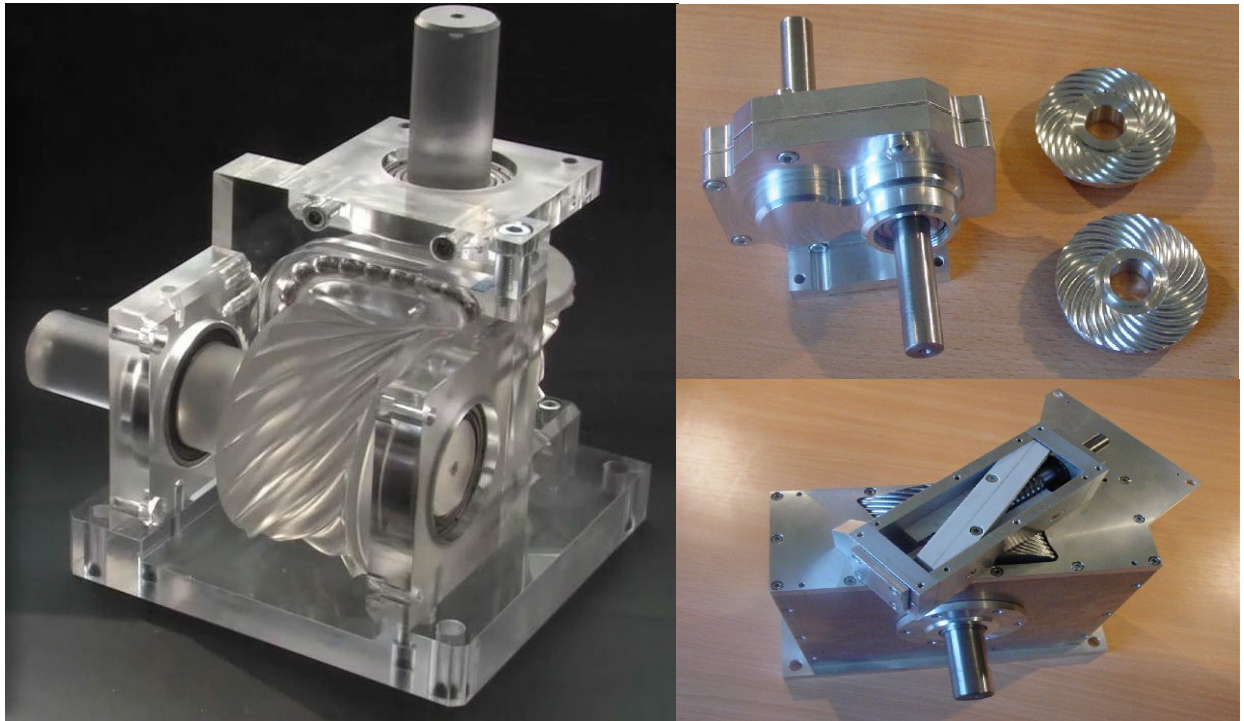
Roller gearing transmission

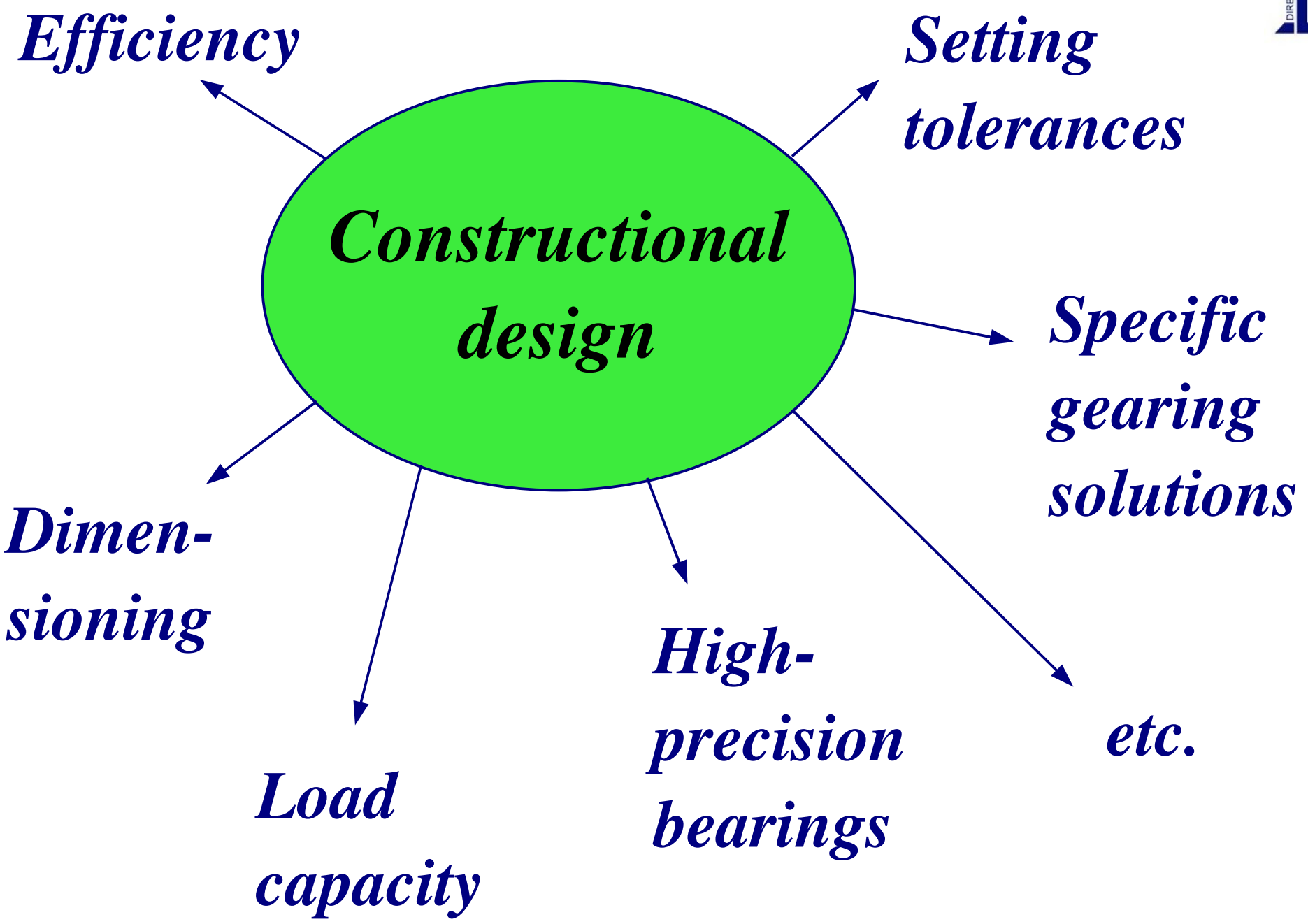
- *New driving machine element system*
- *Patented in 50 countries*
- *Driving and driven elements are connected via balls in slots with special, very complex geometry*
- *Small friction, small driving torque, high efficiency*
- *Arbitrary axis arrangement*
- *Economic production technology is in development*
- *Application: vehicle, aeronautical industry, CNC*










Efficiency
Setting tolerances
Constructional design
Specific gearing solutions
Dimen-sioning
Load capacity
High-precision bearings
etc.

HaXSoN©



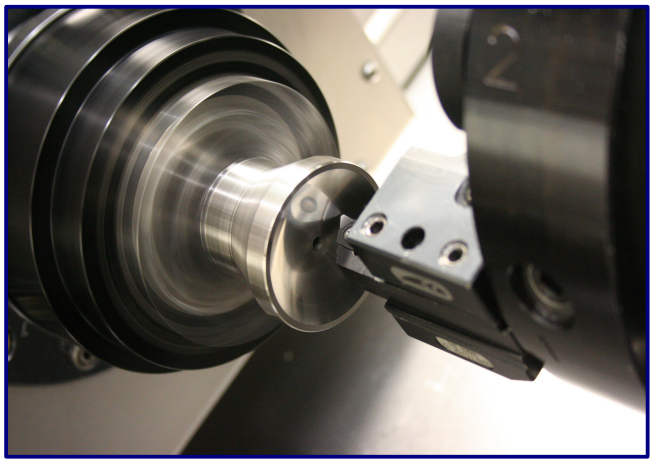
IT background

HaXSoN© modules

CAD-CAM communication

Accuracy problems

Universial technologies?

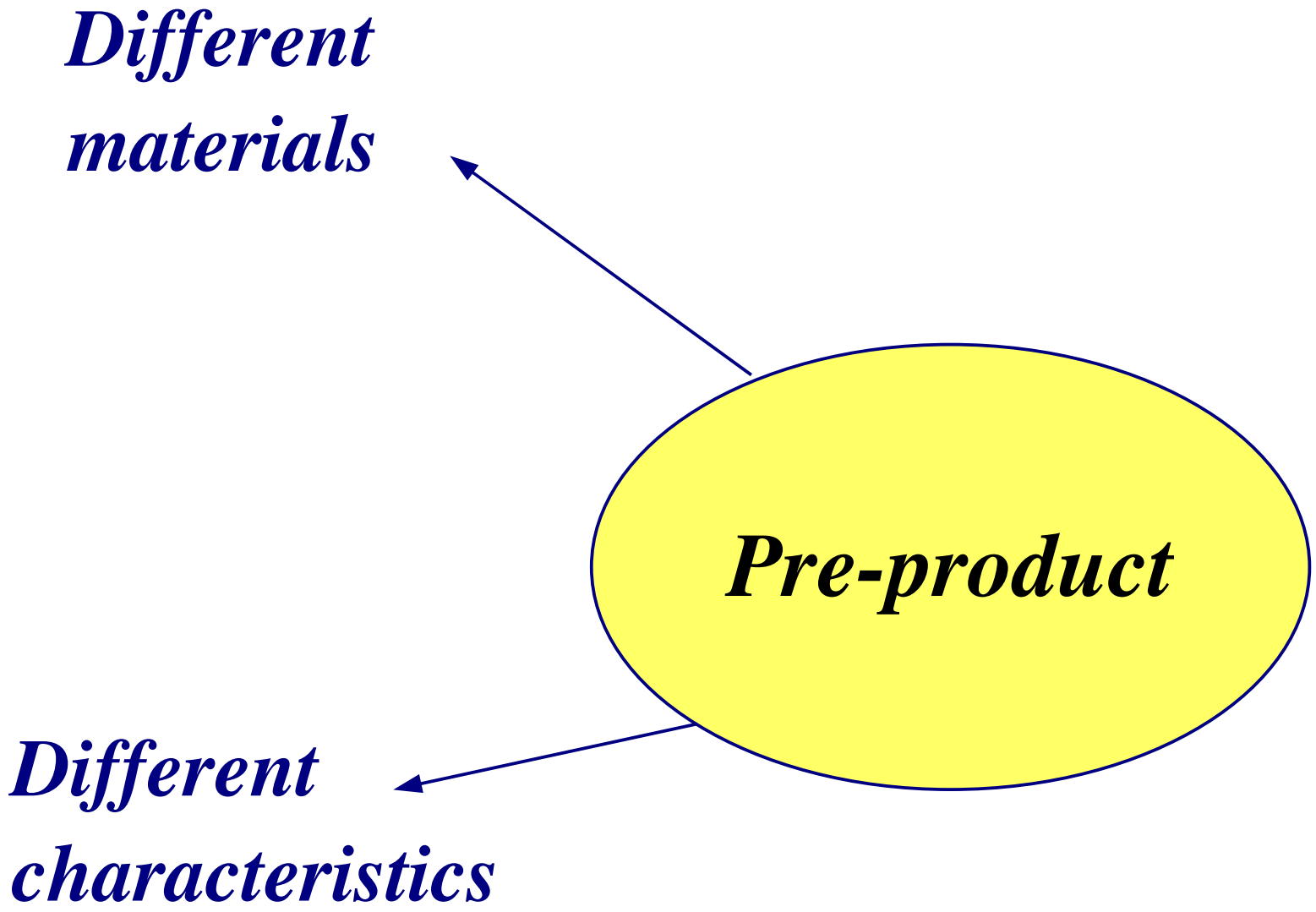


Manufacturing technology

Economic

Mass production

New technologies?


Different materials
Pre-product
Different characteristics

Dynamical, high-precision milling and turning operations or special machine?



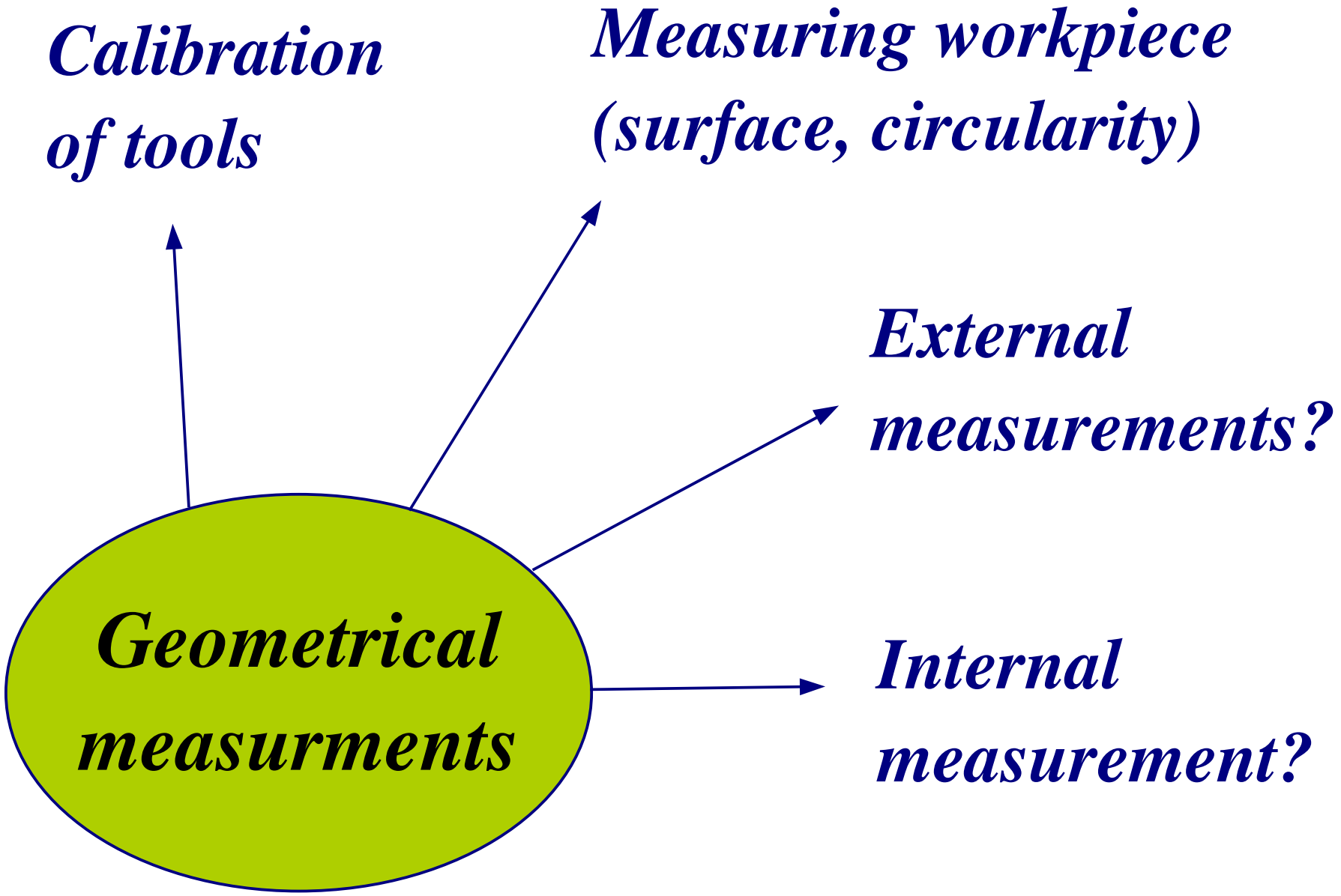
High-precision spindle

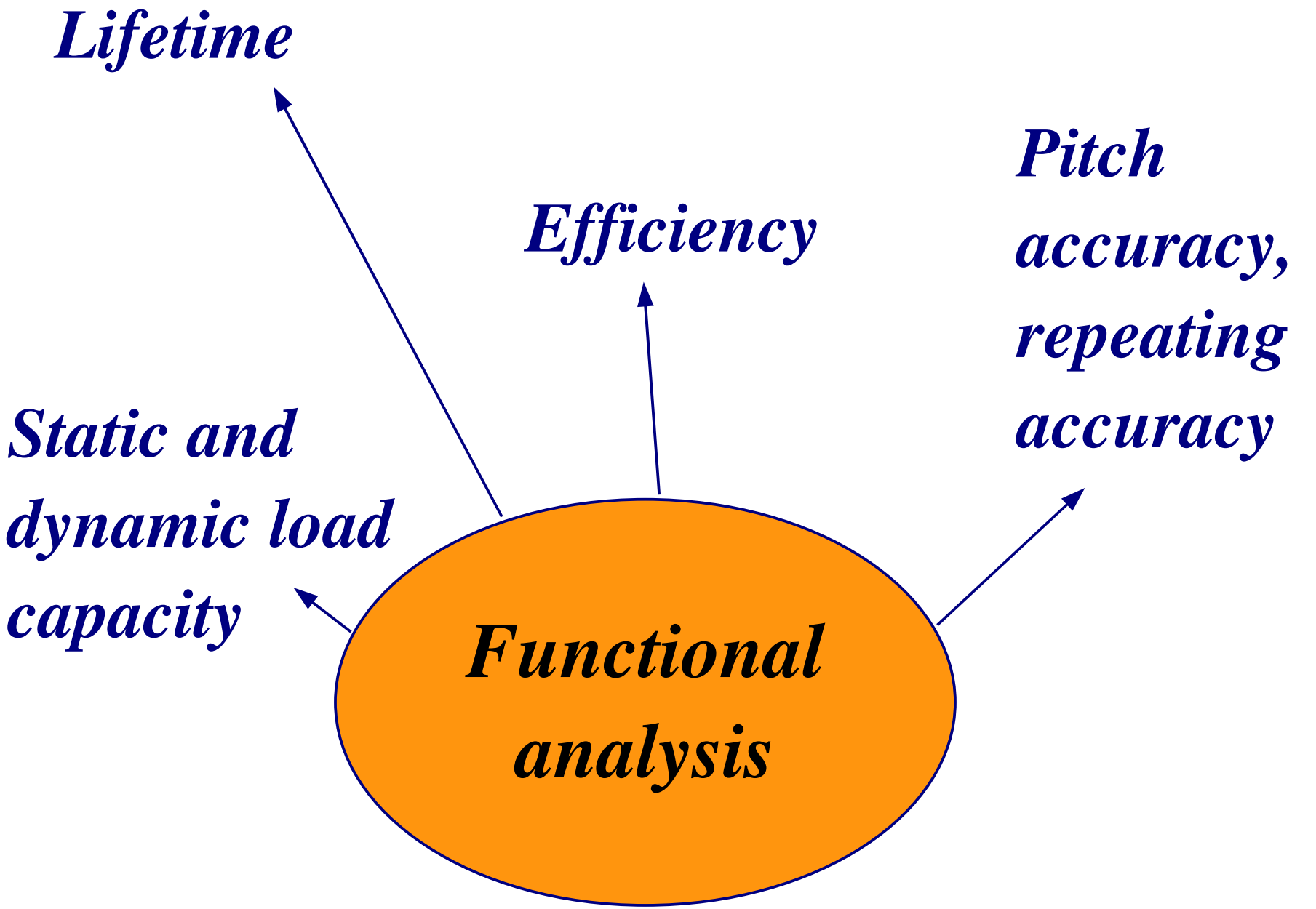
Machining system

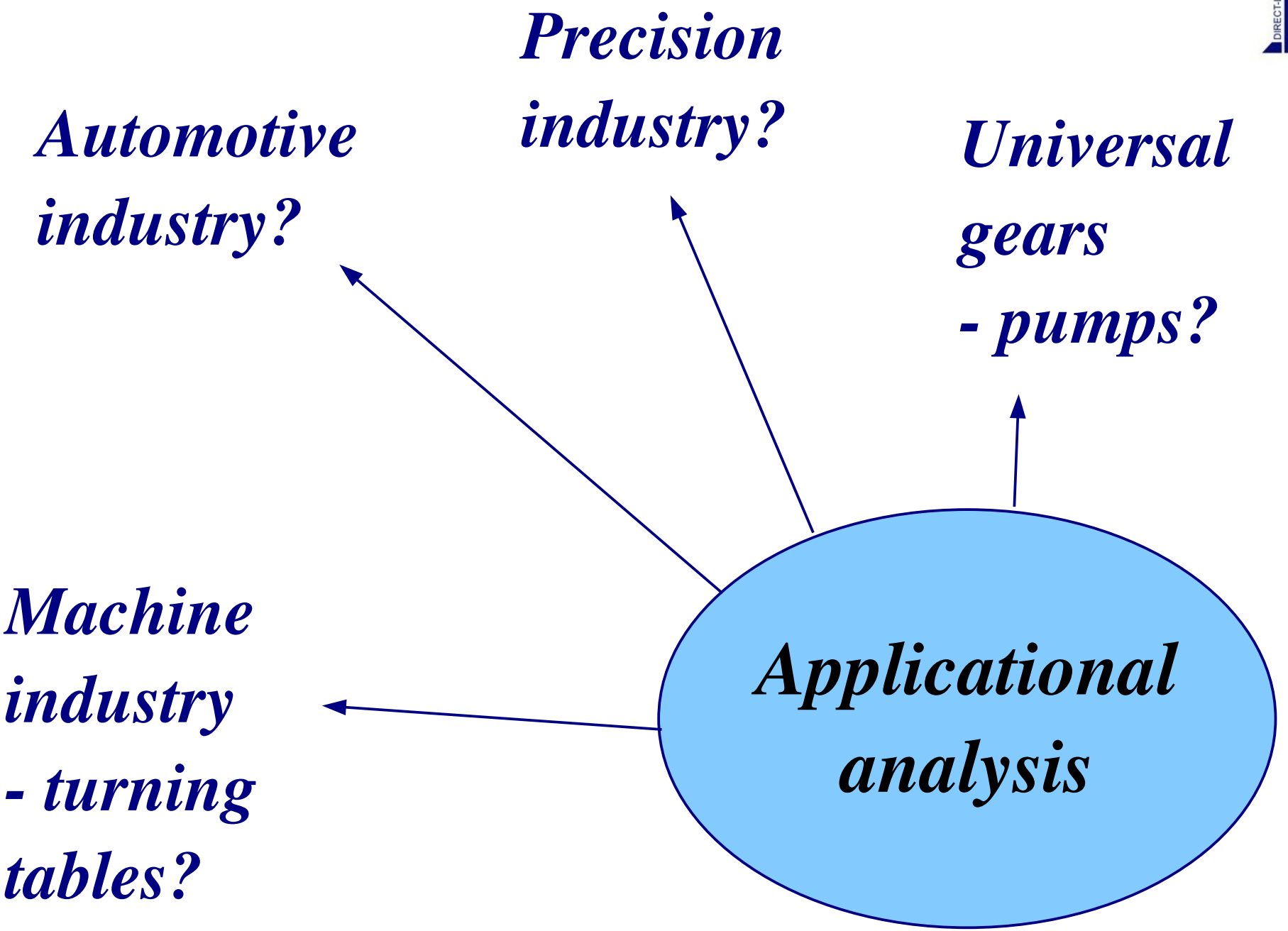
High-precision bearings and slides

High-precision tools

Optimisation of manu-facturing technology

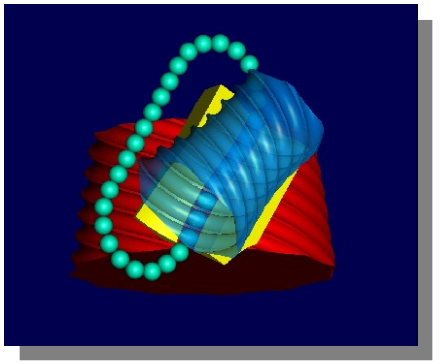

Calibration of tools
Measuring workpiece (surface, circularity)
External measurements?
Internal measurement?
Geometrical measurments


Lifetime
Efficiency
Pitch accuracy, repeating accuracy
Static and dynamic load capacity
Functional analysis


Automotive industry?
Precision industry?
Universal gears - pumps?
Machine industry - turning tables?
Applicational analysis

New project consortium?

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Deadlines

- *Indication of intention to participate:*
  31st of March 2013
- *We send the materials, Your review and supplements to the tasks:* *31st of May 2013*
- *Planned handing in (precondition is successfully finishing easiTAP)* *Autumn 2013*



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