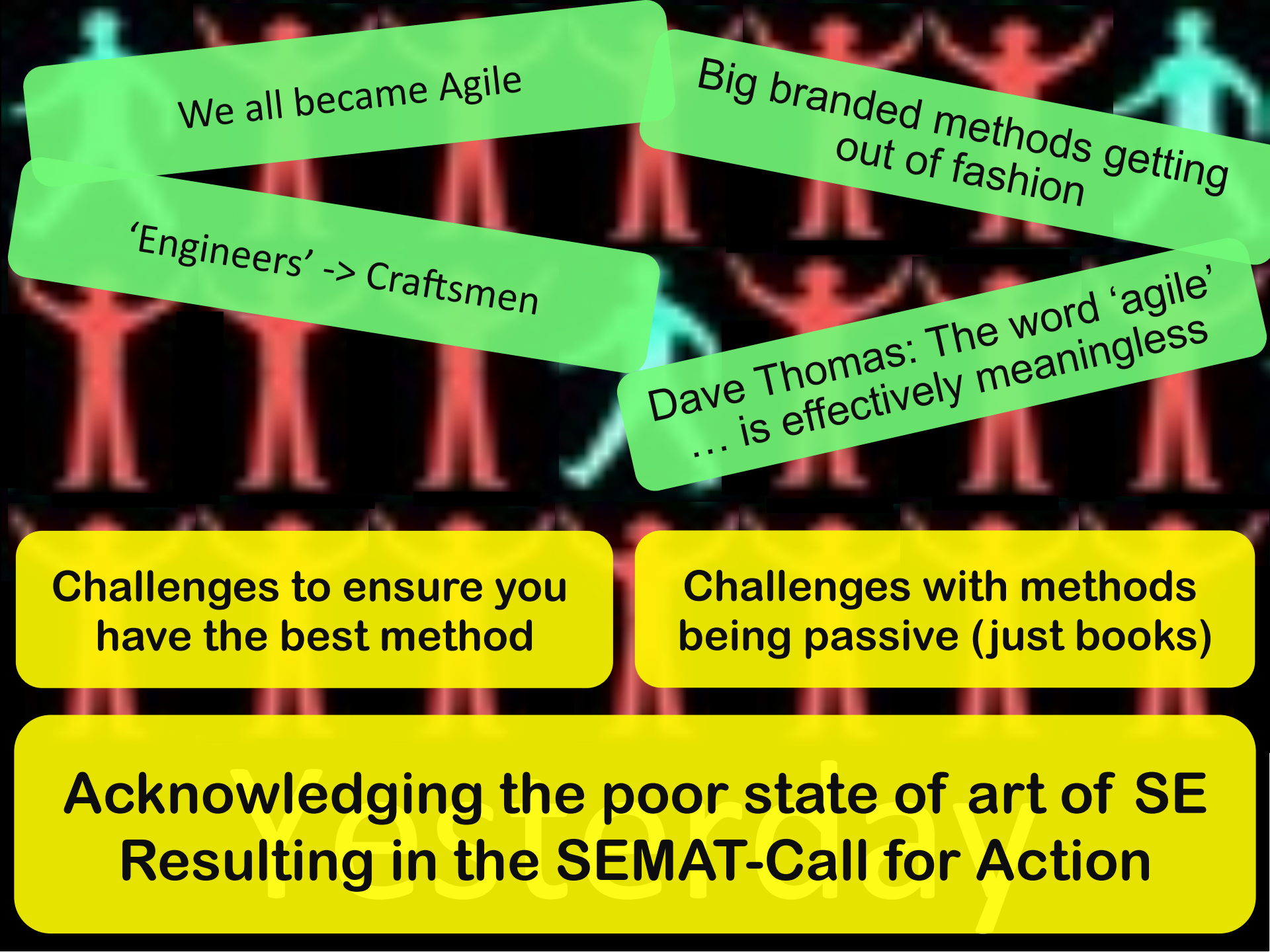
IVAR JACOBSON INTERNATIONAL

Creating winning teams.

The Future of Software Engineering
as seen with SEMAT Glasses

Ivar Jacobson

Yesterday
and to most people also
Today


We all became Agile
Big branded methods getting out of fashion
'Engineers' -> Craftsmen
Dave Thomas: The word 'agile' … is effectively meaningless
Challenges to ensure you have the best method
Challenges with methods being passive (just books)
Acknowledging the poor state of art of SE
Resulting in the SEMAT-Call for Action
Yesterday

We learnt from books? Here some Rational books

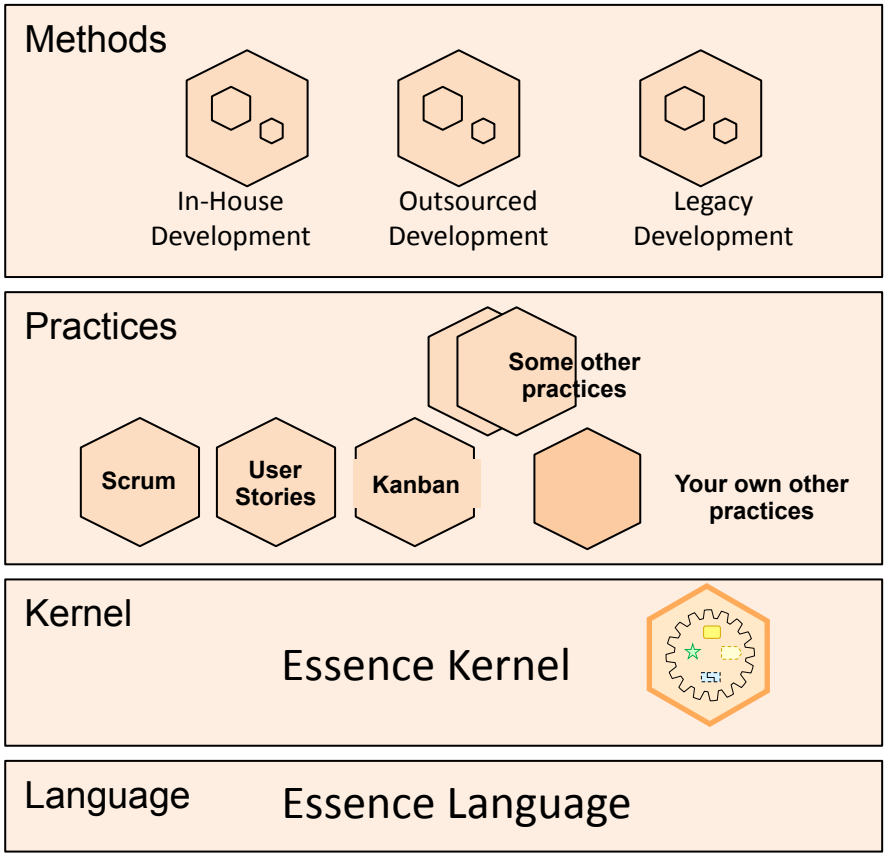
Authors: Ivar Jacobson | Grady Booch | Jim Rumbaugh | Walker Royce
Philippe Kruchten | Dean Leffingwell | Agneta Jacobson
Nasser Kettani | Magnus Christerson | Maria Ericsson I Brian White
Terry Quatrani | Jim Conallen | Gunnar Overgaard | Murray Cantor

The New Method Architecture

Analysts

Leaders

Method Architecture

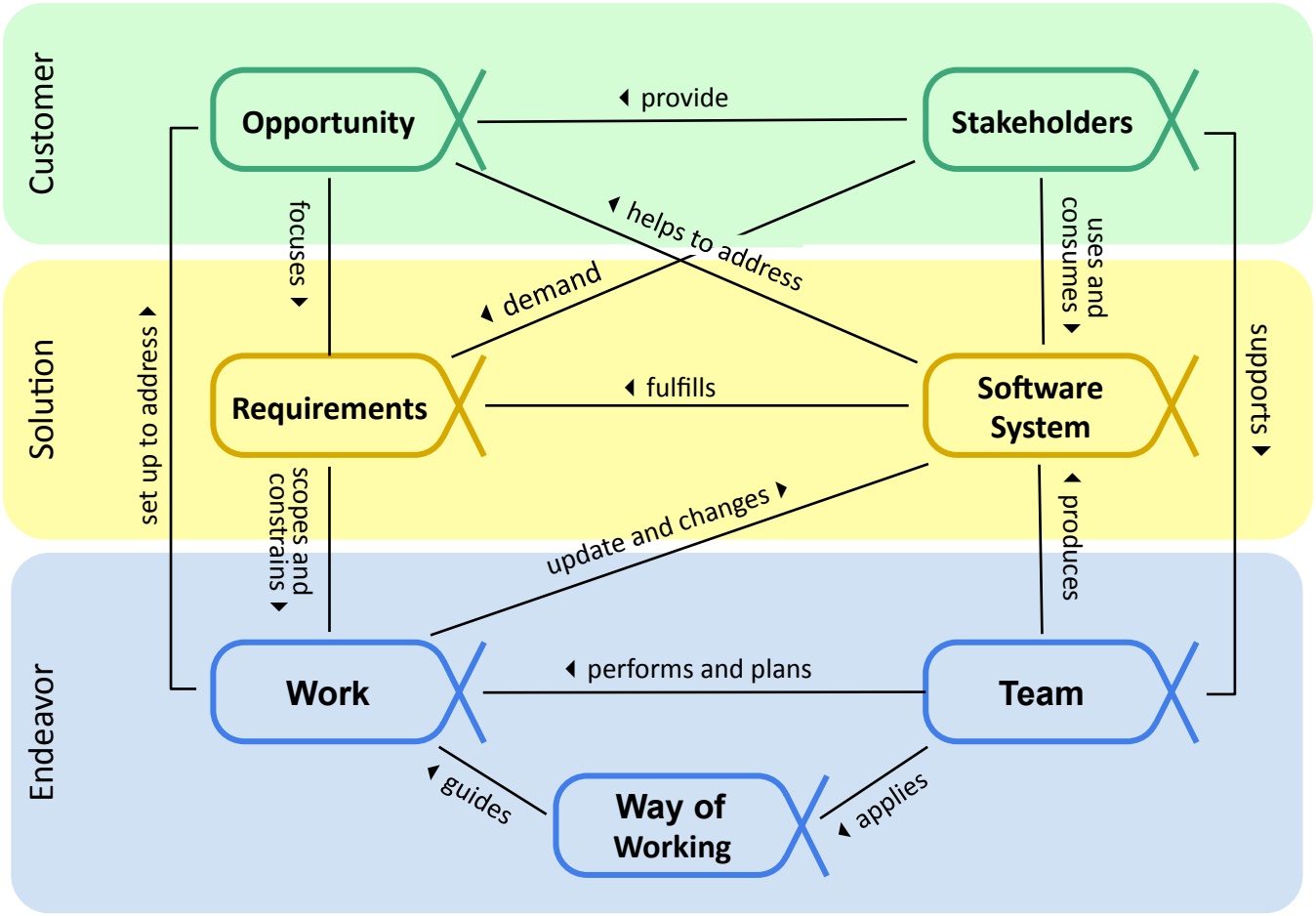


Developers

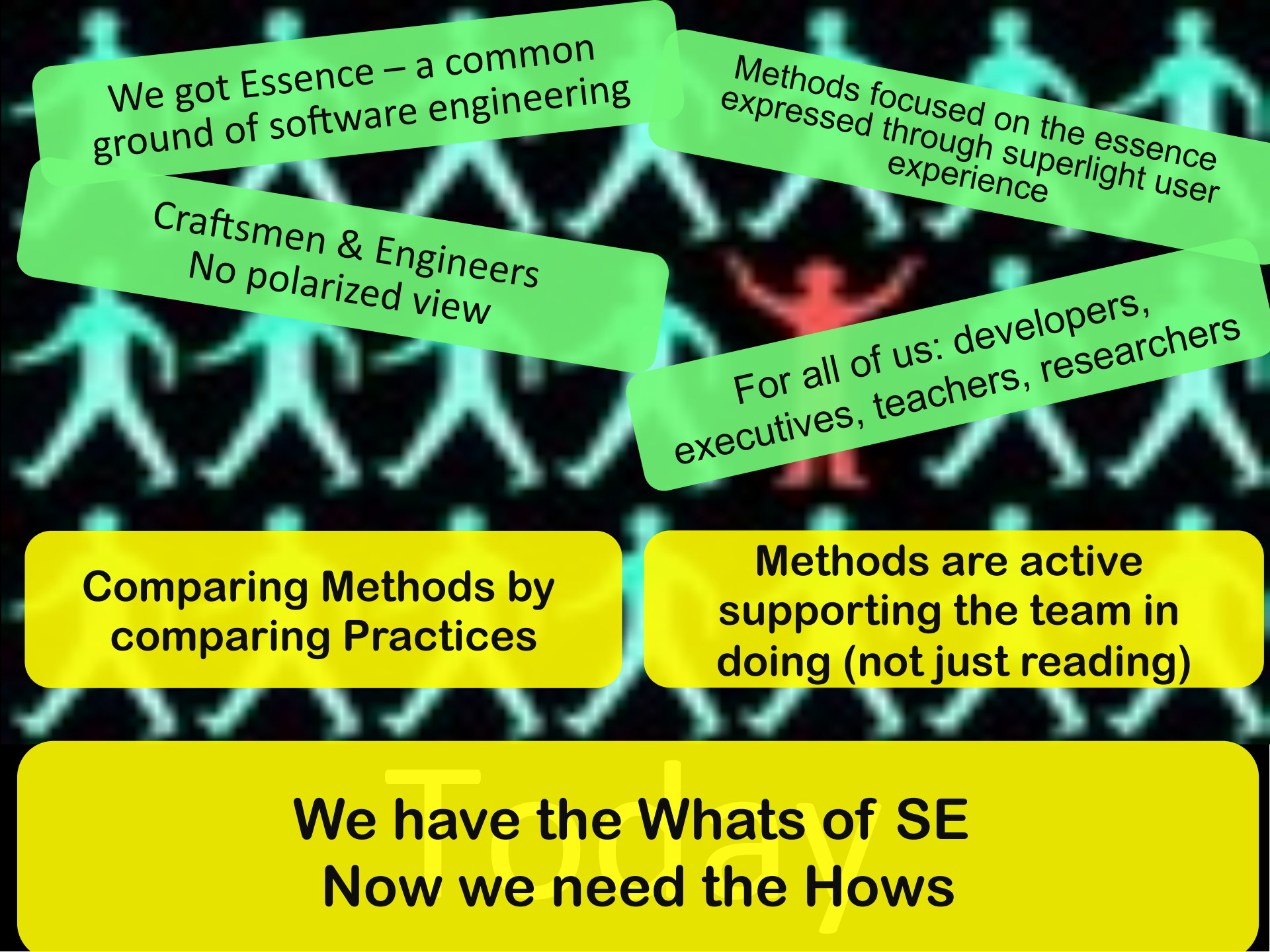
Testers

Process engineers are secondary

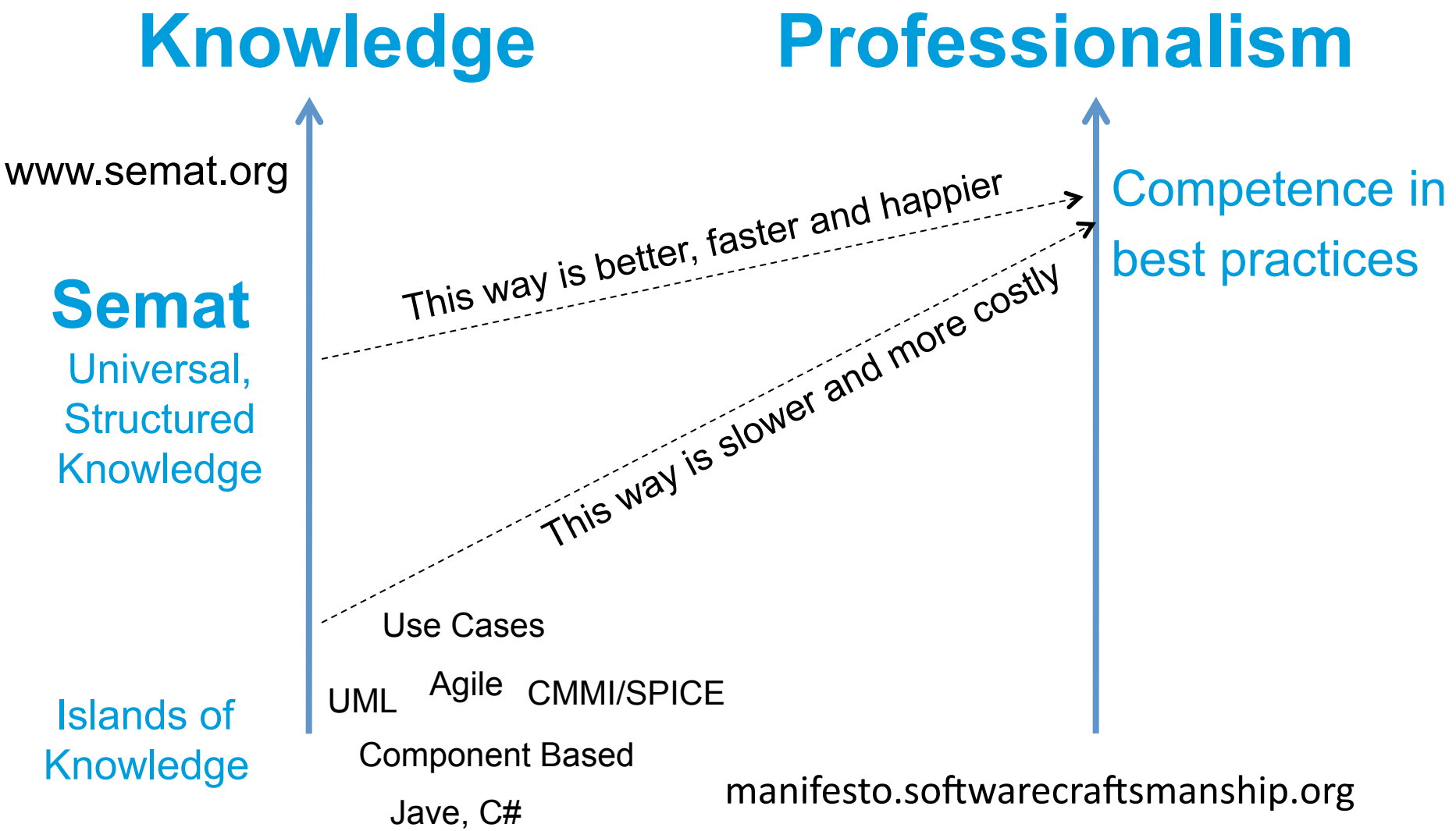
Essence defining the Common Ground



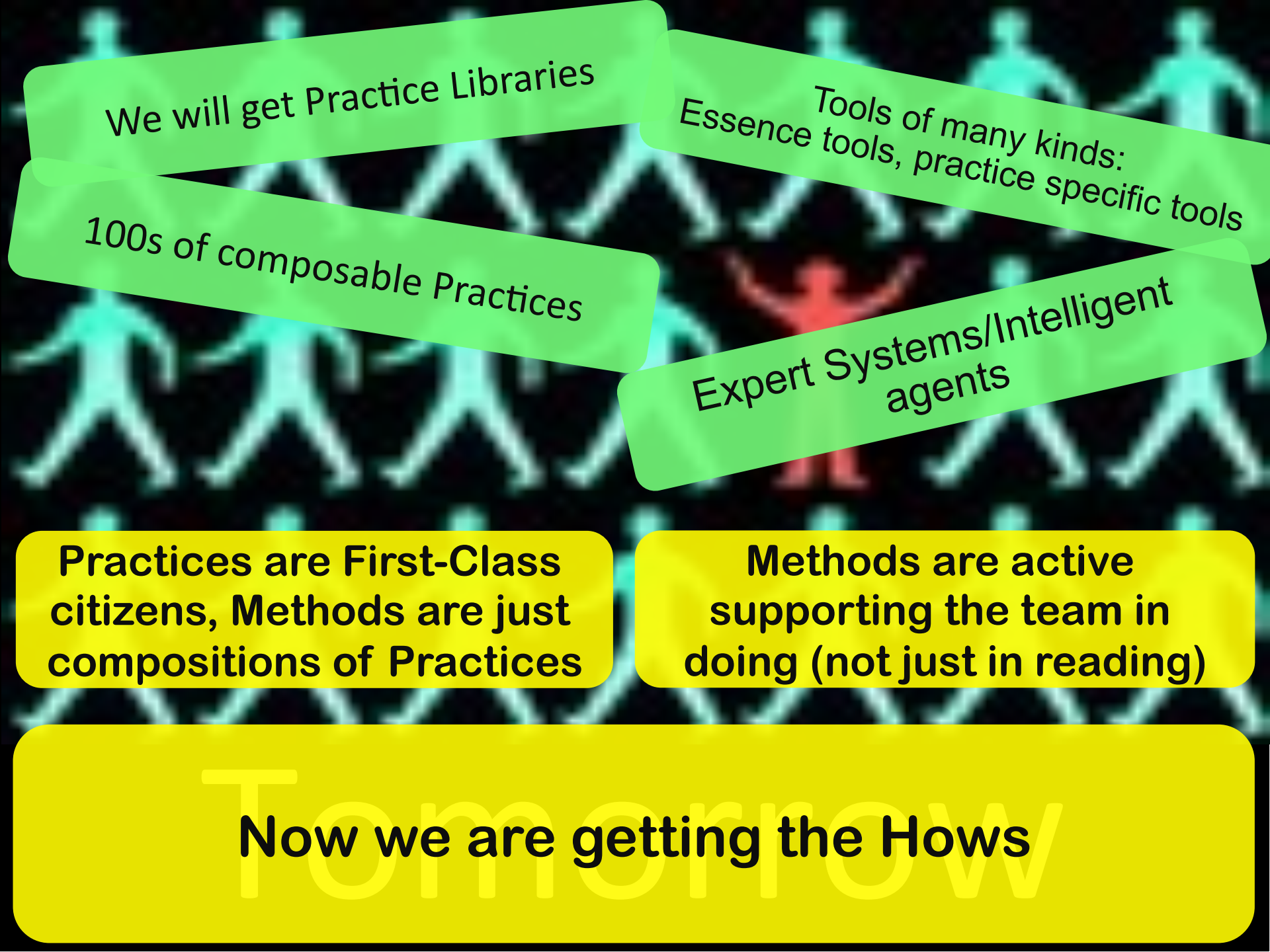
Today


We got Essence – a common ground of software engineering
Methods focused on the essence expressed through superlight user experience
Craftsmen & Engineers
No polarized view
For all of us: developers, executives, teachers, researchers
Comparing Methods by comparing Practices
Methods are active supporting the team in doing (not just reading)
Today
We have the Whats of SE
Now we need the Hows

Good Knowledge Base Promotes Professionalism



U.S.S. ENTERPRISE
NCC-1701
Tomorrow
The Light Works


We will get Practice Libraries
Tools of many kinds:
Essence tools, practice specific tools
100s of composable Practices
Expert Systems/Intelligent agents
Practices are First-Class citizens, Methods are just compositions of Practices
Methods are active supporting the team in doing (not just in reading)
Tomorrow
Now we are getting the Hows

Bill Gates: The Road Ahead

Newsweek December 19, 2005:

”How ’intelligent agents’ and mind-mappers are taking our information democracy to the next stage.”

Bill Gates

The Road Ahead

How 'intelligent agents' and mind-mappers are taking our information democracy to the next stage.

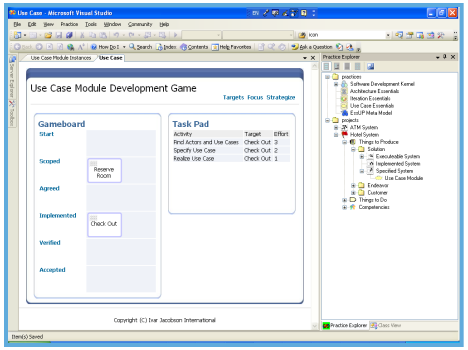
IT'S HARD TO SAY EXACTLY WHEN IT HAPPENED, BUT AT SOME point in the last 20 years the word "knowledge" became an adjective. As intellectual property became increasingly important to businesses, and personal computers started appearing on every desktop, employees morphed into knowledge workers, companies began to focus on knowledge management and key information was stored in knowledge bases connected—in theory—via knowledge networks.

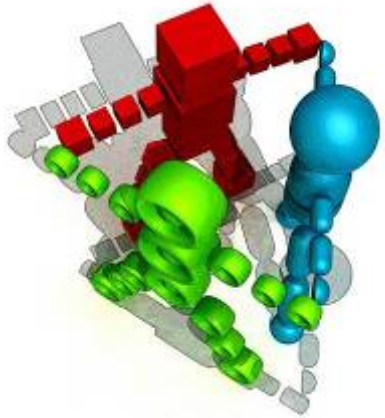
Smart Practices are intelligent agents for software development

Virtual Pair
- Programmers
- Analysts
- Designer
- Tester
- Project Managers

Active Guidance

provides expert advice just when needed



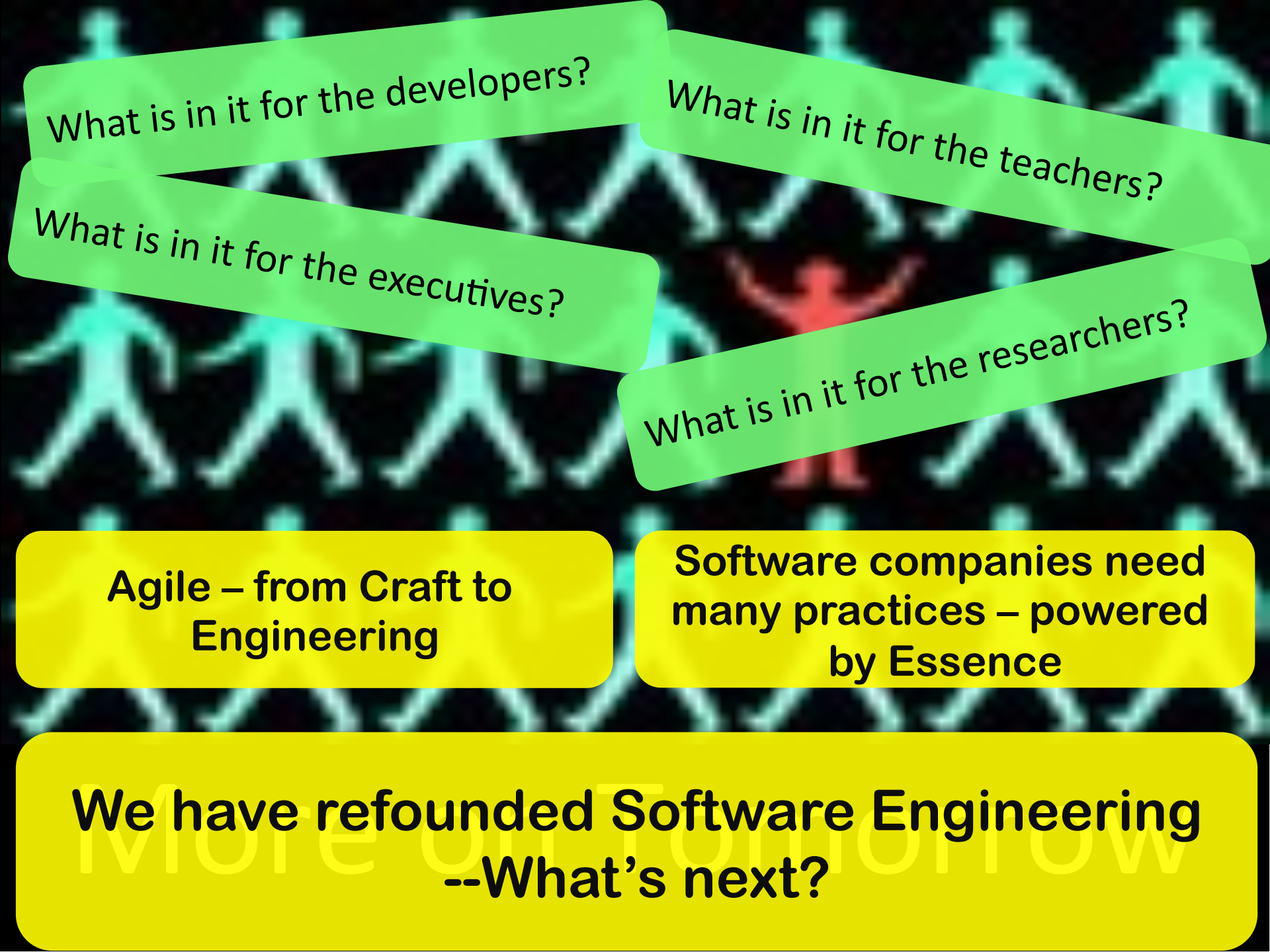


Active Review

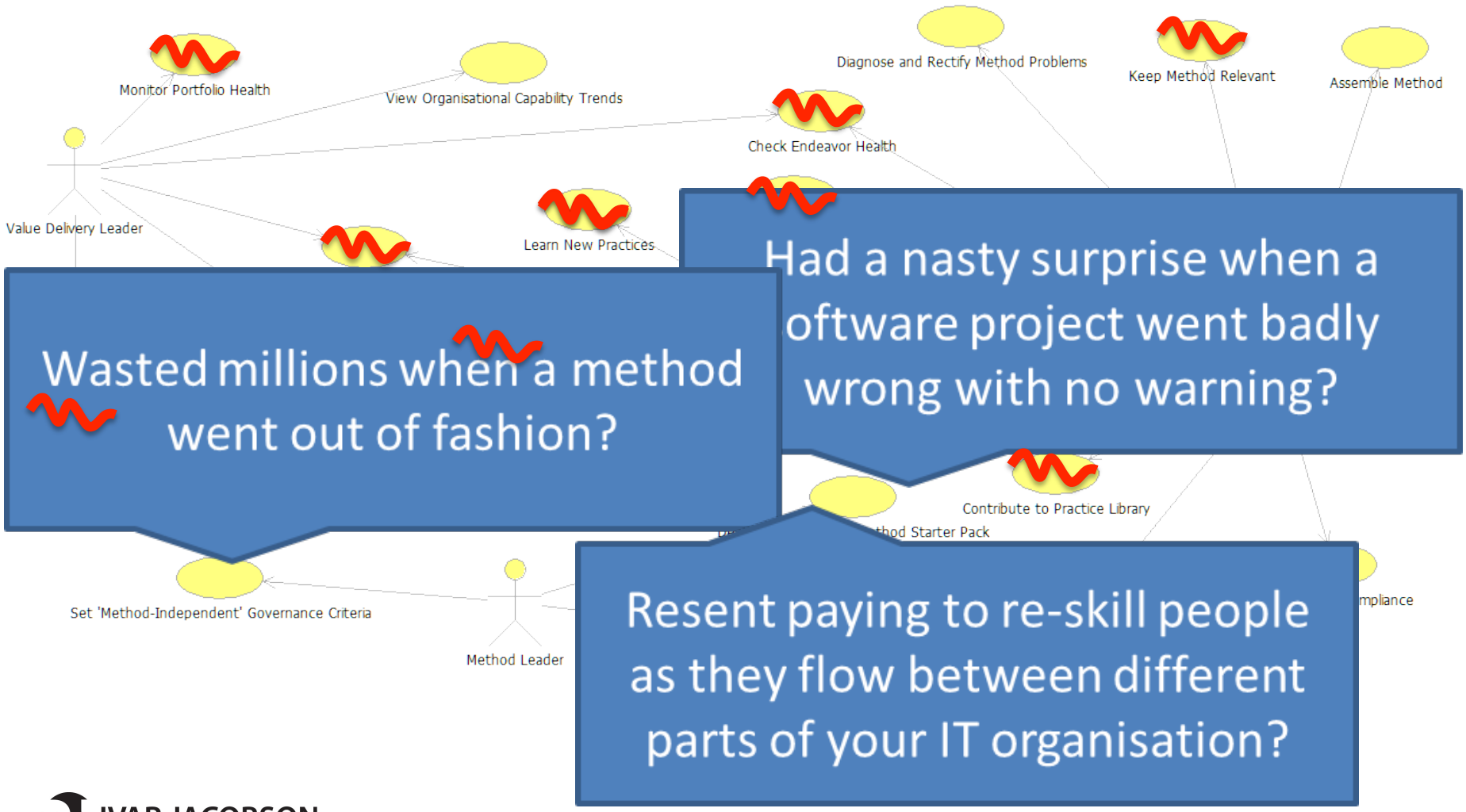
monitors status, progress and quality (individual/mgmt)

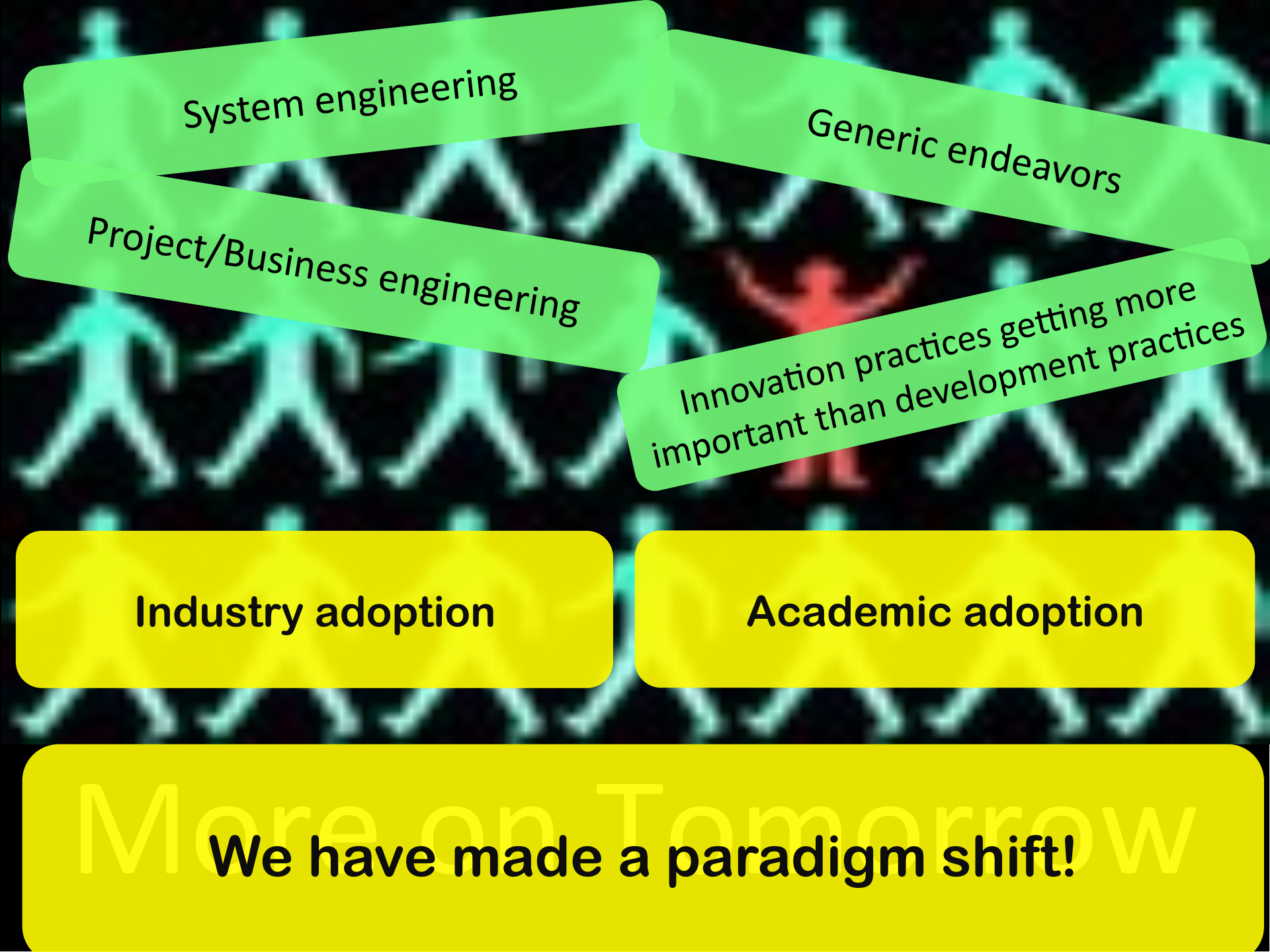
Active Automation

delegates mundane tasks


What is in it for the developers?
What is in it for the teachers?
What is in it for the executives?
What is in it for the researchers?
Agile – from Craft to Engineering
Software companies need many practices – powered by Essence
We have refounded Software Engineering
--What's next?
More on Tomorrow

Pain to Essence Value Mapping




System engineering
Generic endeavors
Project/Business engineering
Innovation practices getting more important than development practices
Industry adoption
Academic adoption
More on Tomorrow
We have made a paradigm shift!

Summary

- Watts Humphrey said ahead of the first SEMAT meeting in Zurich, March 2010, when he said: “This meeting in Zurich is likely to be a historic occasions much like the 1968 NATO session in Garmish.”