supply chain

enterprise risk management

MAGNUS WAKANDER

why create security standards?

Shared direction

Shared values

Compromises

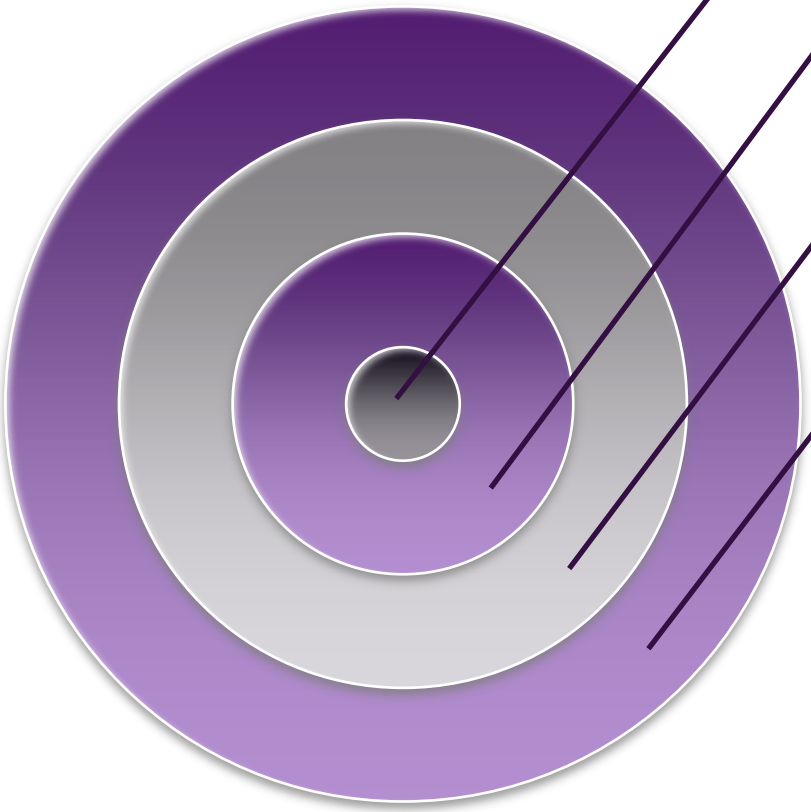
Remove ignorance

Reduce uncertainty

Create & maintain a body of knowledge

"intelligent together"

the shells of a standard



Values to create/ protect/ uphold

Language

Defined context

Relations

Reality

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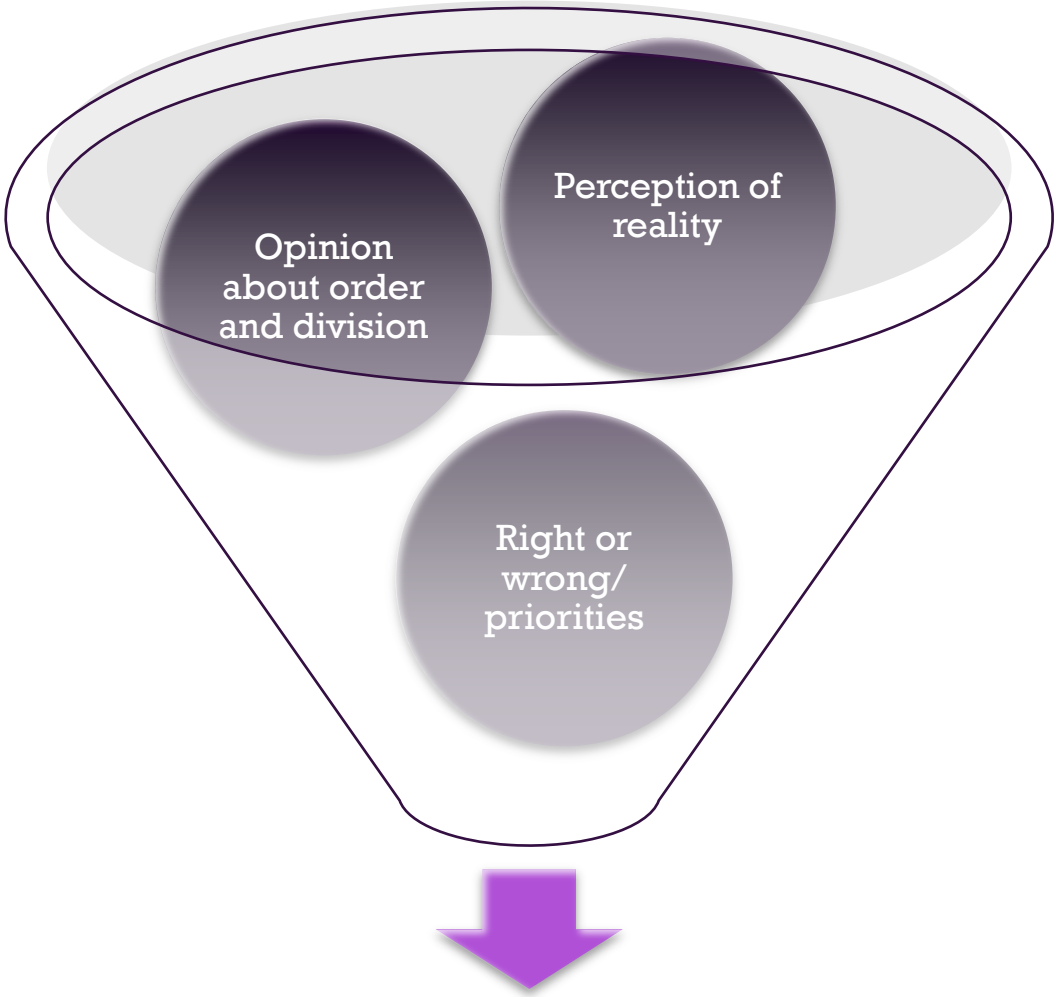
the process



Basis for a value oriented system

Subjective

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man and technology

- Cyber technology* has changed us. It:

  Amplifies the power in human networks.

  Enhances basic human properties.

  Is liberalizing.

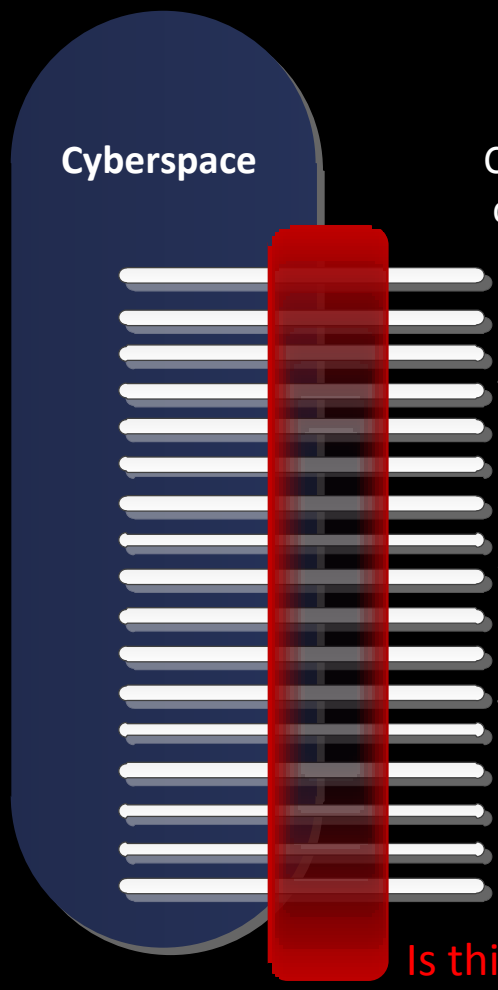
  Eliminates boundaries.

  Brings the world to your door.

- * Example: Internet, smartphones, Facebook, LinkedIn, E-mail, Cloud computing, E-government, Video on demand, etc.

Magnus Wakander, Dec 2012
Based on a picture from EU IMG-S CSWG

The really real world



Cyber dependent communities (ex)

- Global Positioning System (GPS)
- Banking/Finance
- Criminality
- Traditional businesses
- E-commerce
- Public E-services
- Public services
- Critical infrastructure services: Energy, ICT, water etc.
- Video-on-Demand/Digital TV
- E-communities, Collaboration and social media
- Politics and E-government
- Journalism and similar news media
- Education
- Culture and gaming
- Crime prevention, forensics etc.
- Cyber defence
- Cyber intelligence

Is this Cyber security?

management

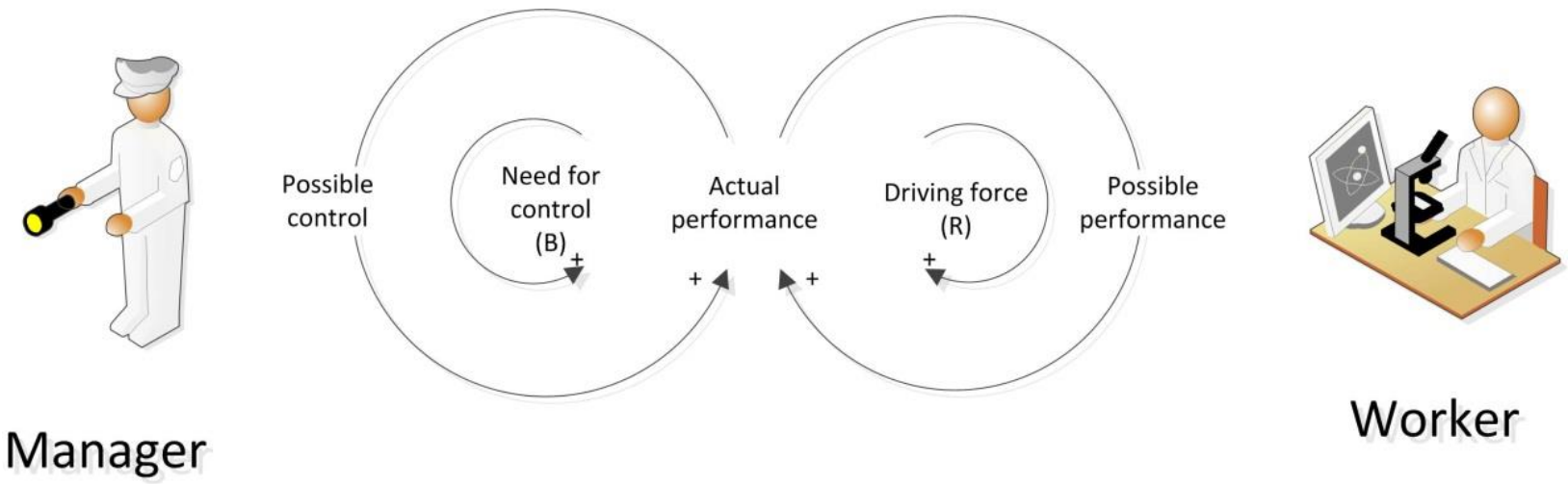
intelligent control

The difference between doing what you want to do or what is needed.

Control is not the same thing as performance.

Control is slow as it requires precision. Do we need *that specific slow*?

Intelligent control is making a process do what we want it to do.



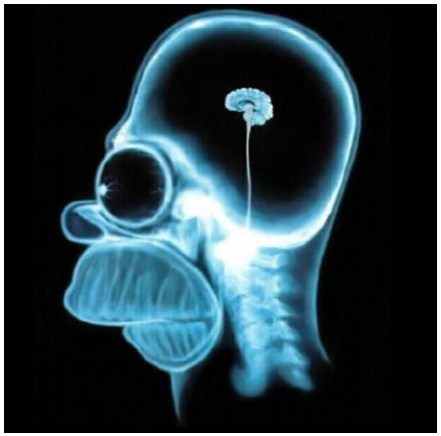
intelligence

”the ability to acquire and apply knowledge and skills”, Oxford Dictionaries

compared to:

ignorance: ” lack of knowledge or information” , Oxford Dictionaries

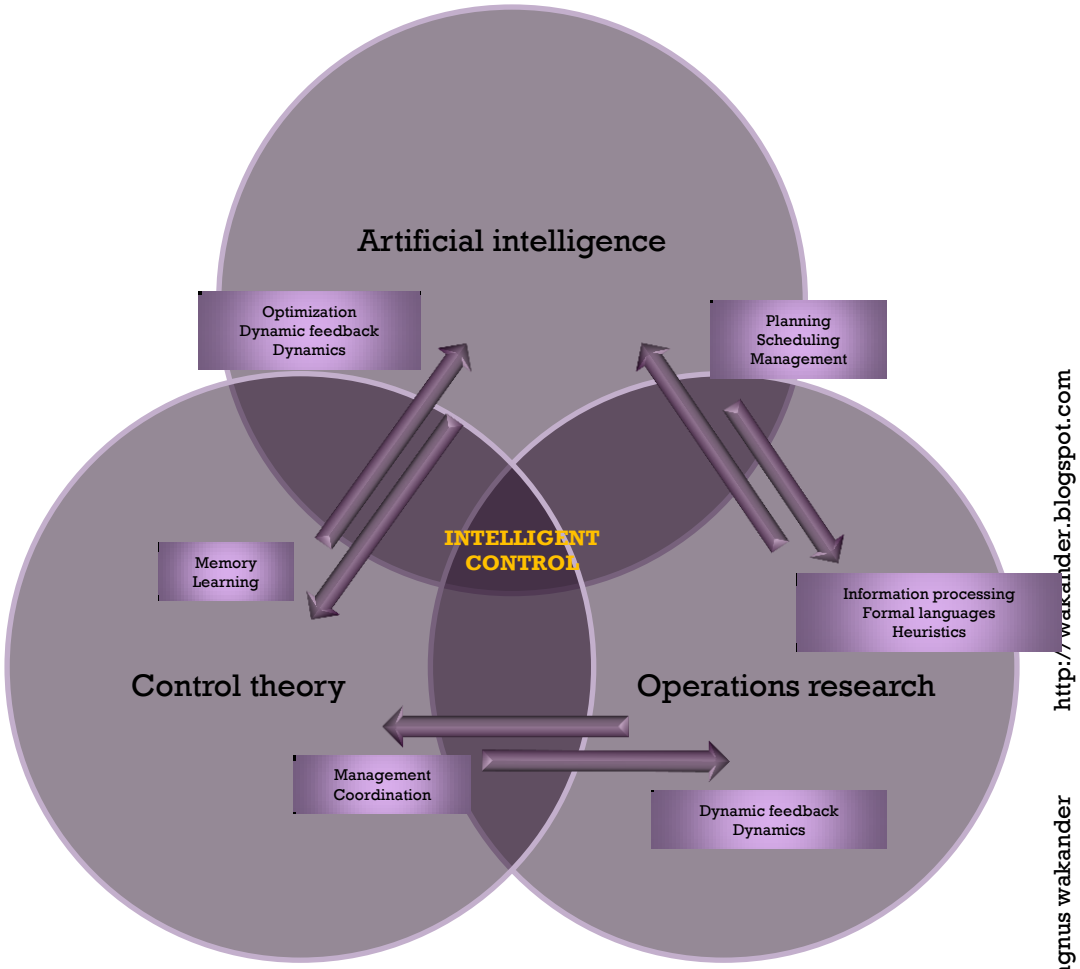
therefore: intelligence means removing ignorance



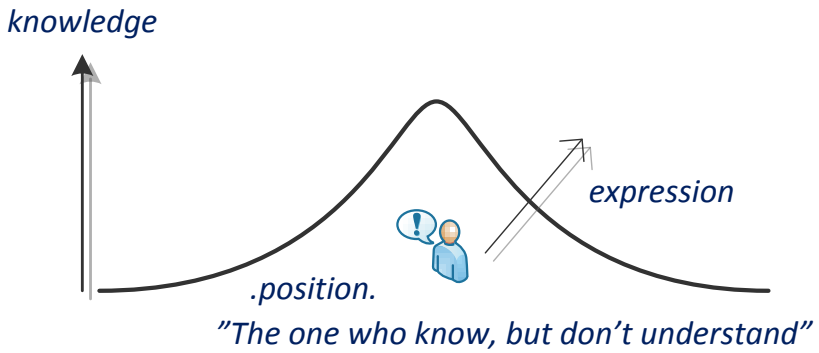
intelligent control

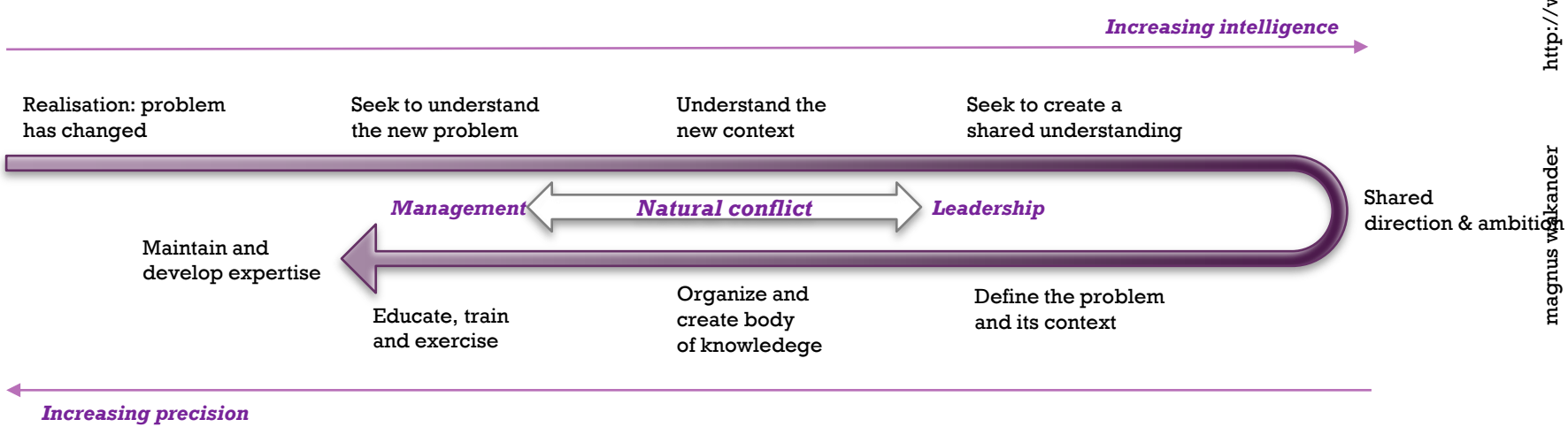
The principle of increasing precision with decreasing intelligence (IPDI).

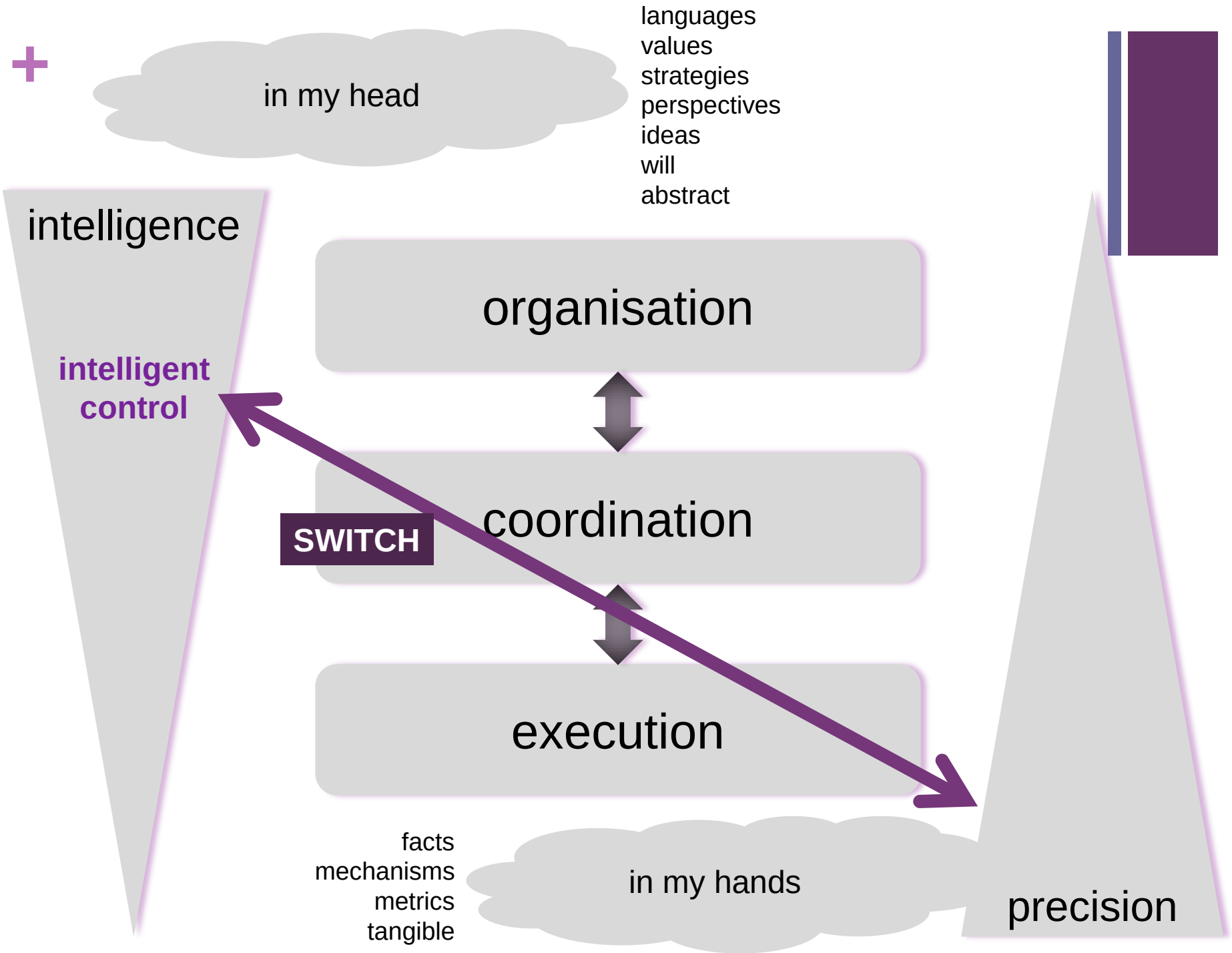
Analytical functions are implemented using intelligent controls and functions with entropy as a measurement of the probability of uncertainty in the design.



the human experience






in my head
languages
values
strategies
perspectives
ideas
will
abstract
intelligence
intelligent control
organisation
coordination
SWITCH
execution
facts
mechanisms
metrics
tangible
in my hands
precision
http://wakander.blogspot.com
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intelligence

intelligent control?

multiple languages
values
relations
direction
principles
guidelines
concepts

security standards & communities

single language
rules
solutions
requirements
definitions
metrics
facts
truths

precision

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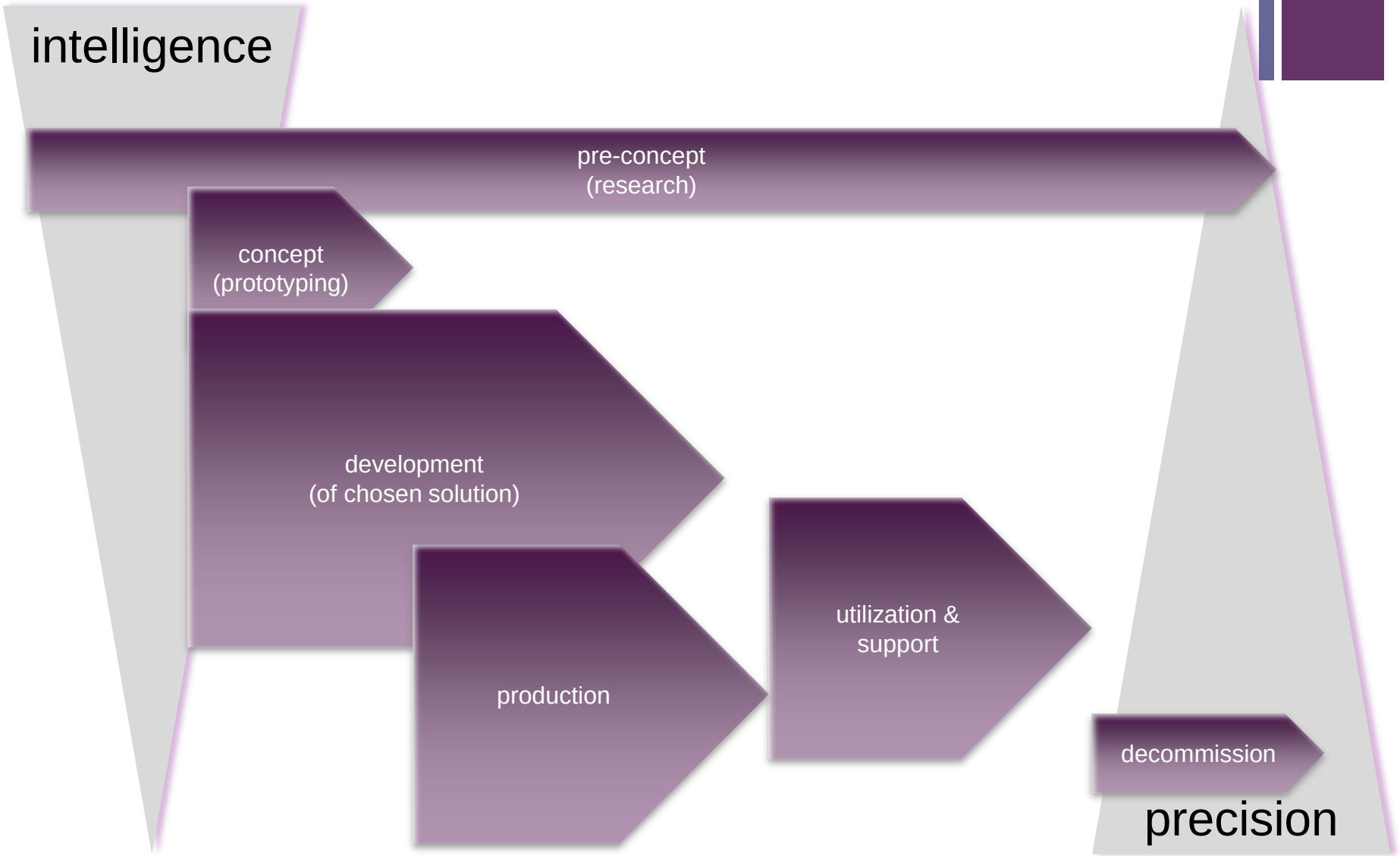
ISO/IEC 15288
Systems and software engineering
System life cycle processes

this is but one simple example



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knowledge & languages

National Security

Systems Engineering & Acquisition

Commercial & Legal Practices

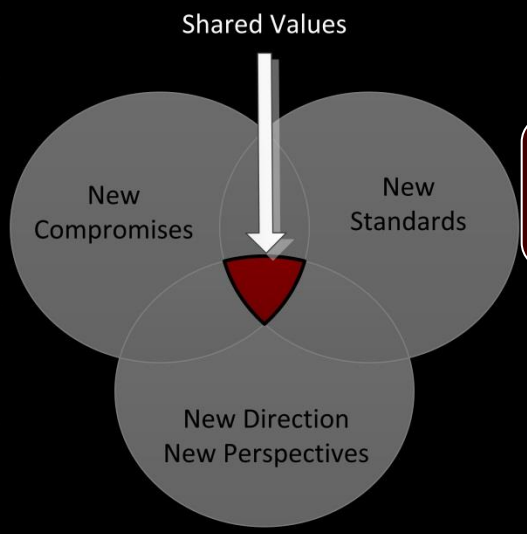
Quality Control

Conventional Military Operations

Banking & Finance

Cyber Defence & Intelligence

Project Management



Systems & Product Assurance

Management

Information Security

Supply Chain Management

Life Cycle Management

Critical Infrastructure Protection

Process Management

Leadership

Dilbert:

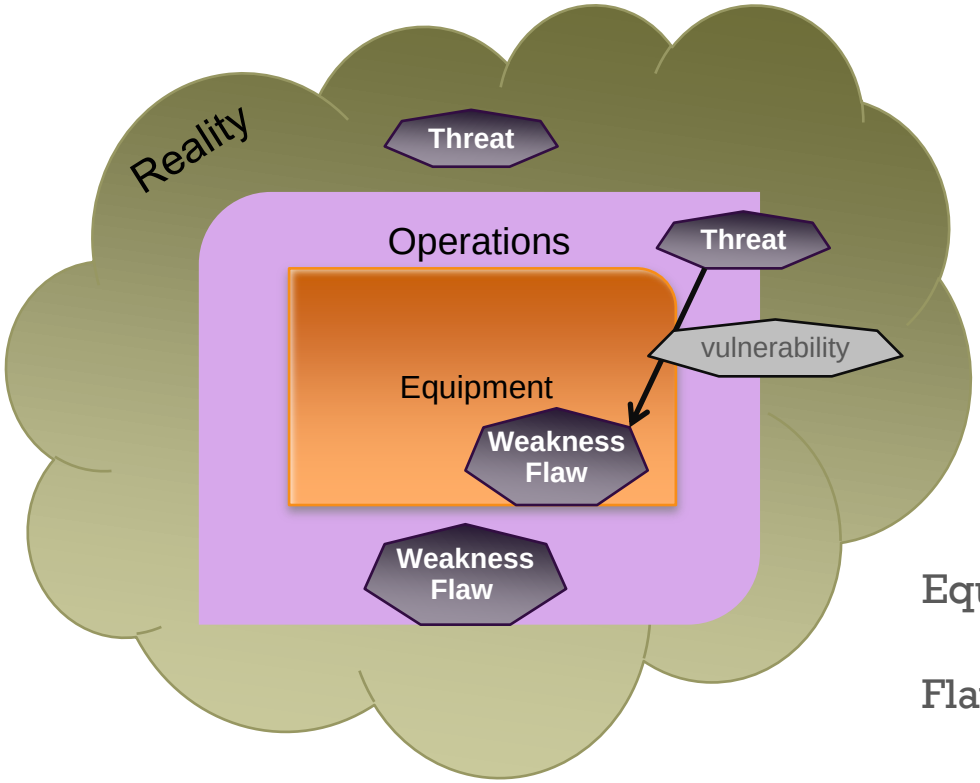
"- Change is good. You go first."

ISD

information security declaration

supply chain risk management

basics



Equipment needs to be ”secure enough”

Flaws and weaknesses needs to be fixed

There is always time and budget constraints

the context

Goal = Tolerable risk level with known economy.

Risk level is seldom quantifiable.

Tailored assurance is key.

Focus: create balance between economy and risk.

Time is important.

framework

ISD is integrated into operational systems that are based on ISO/IEC 15288.

ISD works with ISO/IEC 2700n.

ISD draws on experiences from the US and UK, primarily:

- US DIACAP and NIST
- UK GCHQ/CESG Tailored Assurance etc.

ISD is Lean.

ISD went live January 2012.

vulnerabilities

Eliminating vulnerabilities requires knowledge about methods of exploitation.

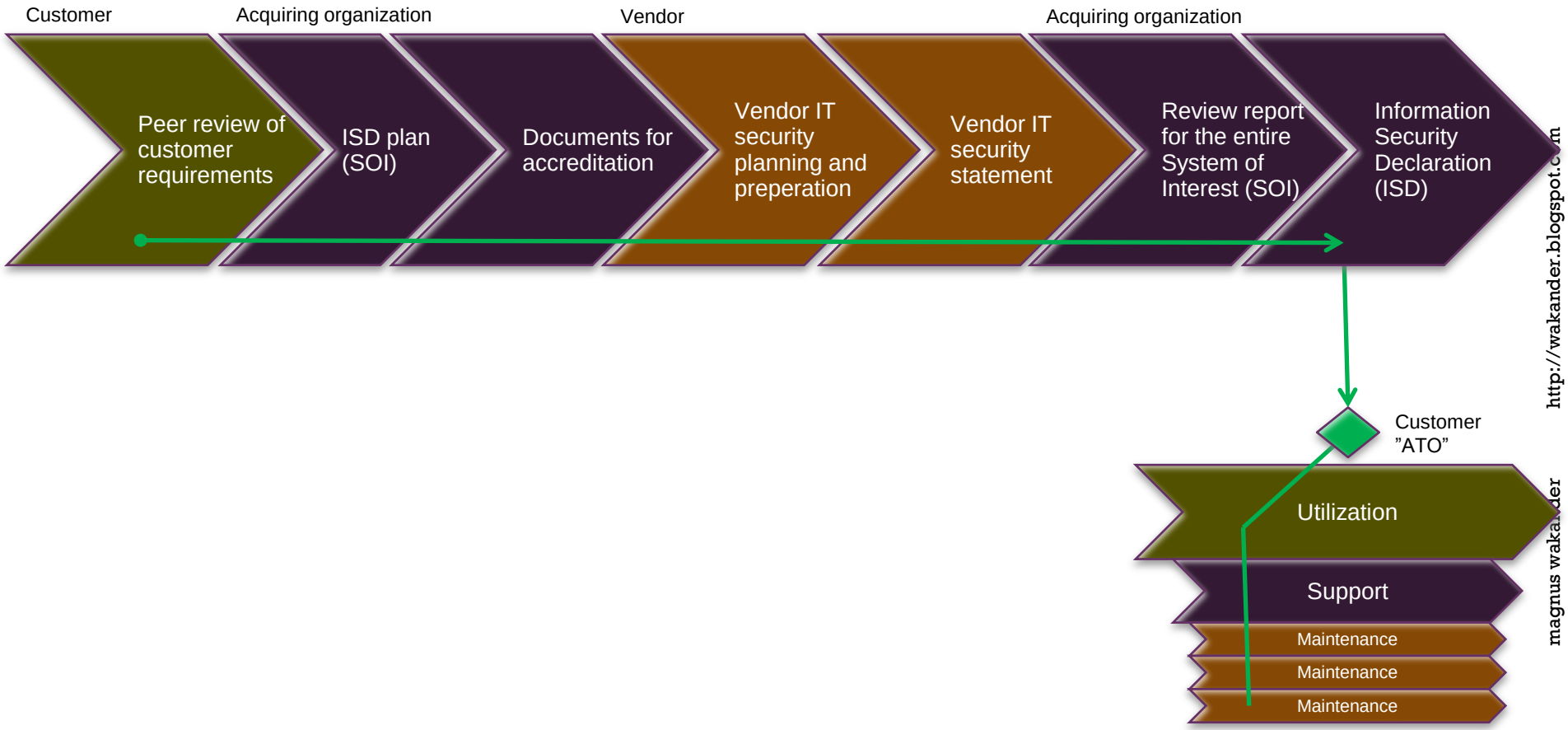
Eliminating weaknesses can be done using solid design principles.

ISD and trust

1. People
2. Process
3. Technology

Uniformity
Transparency
Simplicity
Dialogue
Education
Separation of duties
Everything we do needs to be done
Structured management of requirements
Evidence
Traceability
Increased efficiency
Increased competence

the chain of trust



key aspects

The System of Interest (SOI) owns the economy.

Planning primarily done on system level 2 and 3, but…

…planning involves different system levels for different systems.

Coordination between projects for each System of Interest.

Cradle to grave.

Tailorization.

Pragmatic solutions.

the thing

Risk management through intelligent systems engineering.

ISD took time:

- Different forms of cognitive ability.
- Most of the work was making it simple.
- Simple require prioritizations.
- There were feelings involved.

final thoughts

uncertainty

When you are doing something, **uncertainty** will arise.

There are two forms :

- Subjective (reduceable). ← Subject to (temporary) lack of knowledge.
- Objective (not reduceable). ← Requires that the problem be changed.

Do not confuse uncertainty with probability.

be certain that you're doing the right thing before calculating the risk of failure…

recap

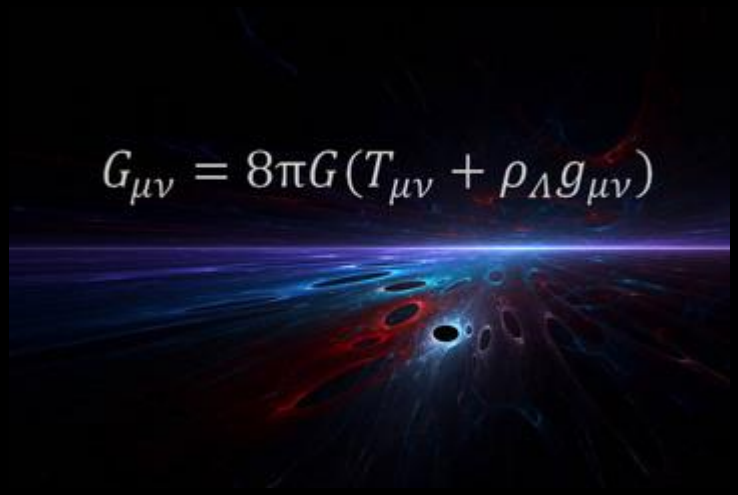
ISO/IEC 15288.

Those mastering 15288, masters supply chain.

Supply chain security and Supply chain risk management is <u>part of</u> life cycle management (LCM).

Keep it simple.

Make sure you've got the stamina to see it through.



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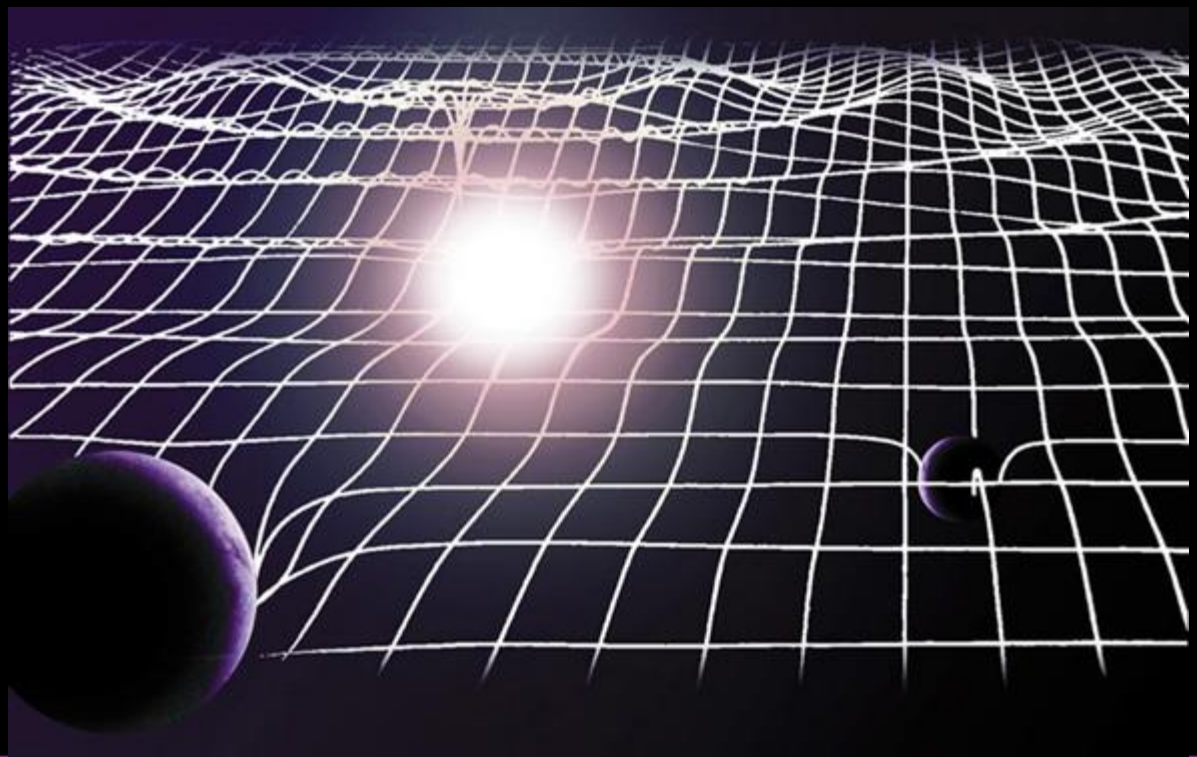

”weakness of attitude becomes weakness of character.”
--einstein

magnus wakander

William Gibson, Neuromancer (1984)

*"**Cyberspace**.*

A consensual hallucination experienced daily by billions of legitimate operators, in every nation, by children being taught mathematical concepts...

A graphic representation of data abstracted from banks of every computer in the human system.

Unthinkable complexity.

Lines of light ranged in the nonspace of the mind, clusters and constellations of data.

Like city lights, receding..."