

LEAN Topology

In search of the new new lean company



Lean Kanban France 2015

I'm pablo

<http://areyouagile.com>

Helping Change

Supporting organisational management

Facilitating Agile, Lean, Startup, etc

At beNext

<http://benextcompany.com>

benext
be your potential

Topology,

it is an area of mathematics concerned with the **properties**
of space that are **preserved** under **continuous**
deformations

– wikipedia

Naiïve perspective

There are two path you can go by, but in the long run

There's still time to change the road you're on

– Staiway to heaven, Robert Plant

I will talk about

1° Rethink Lean ?

2° Properties preserved and continuous deformations ?

3° Prospective : the new new lean company

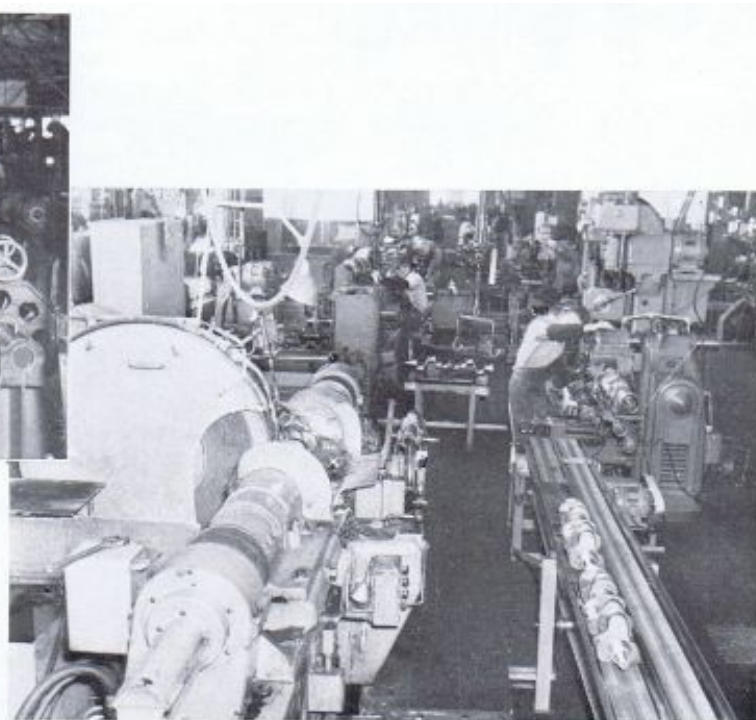
Preserved?

KAIZEN - before - after



機械工場の クランクシャフト加工ラインの発展。

- (上) ロット生産のため工程中にストックが目立っています (昭和23年ごろ)。
(右) これをコンベアによる流れ作業方式に改めて工程間の同期化をはかり、ストックをなくしました (昭和28年ごろ)。

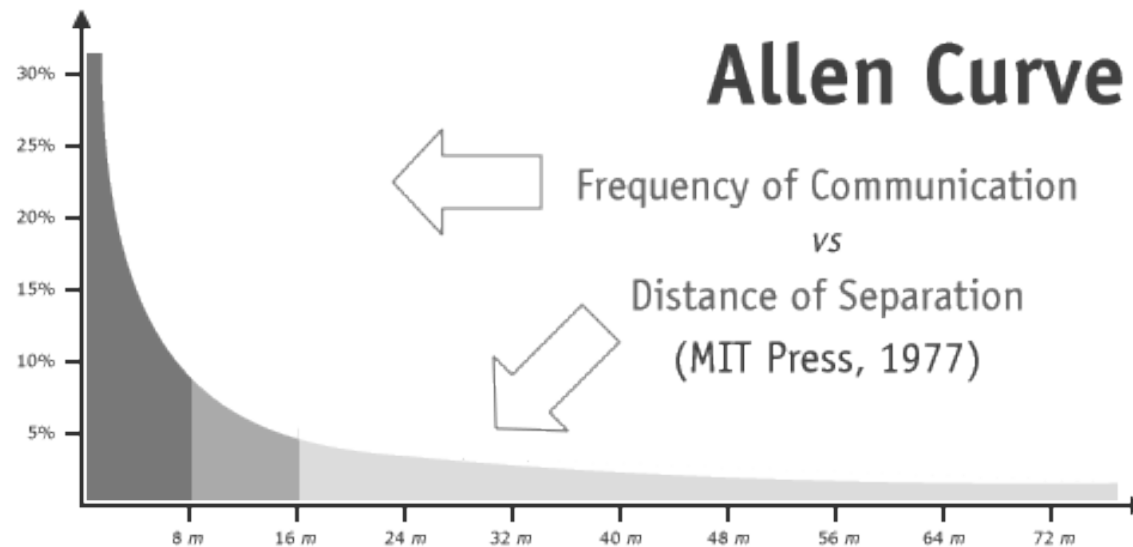


Slum

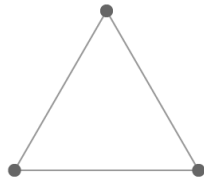


our essence?

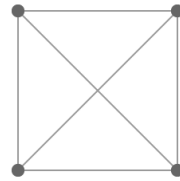
communication (Allen's curve)



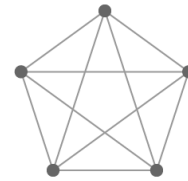
Communication (size)



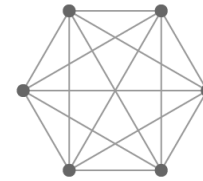
3 people, 3 lines



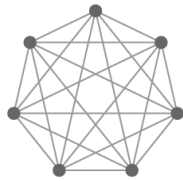
4 people, 6 lines



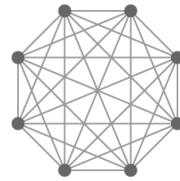
5 people, 10 lines



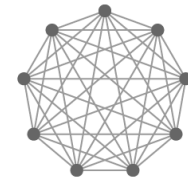
6 people, 15 lines



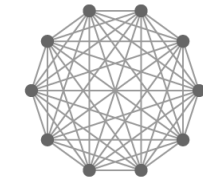
7 people, 21 lines



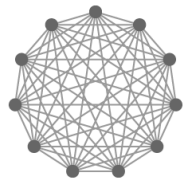
8 people, 28 lines



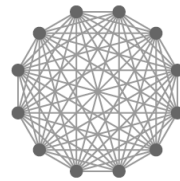
9 people, 36 lines



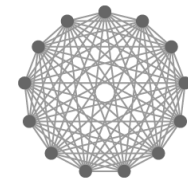
10 people, 45 lines



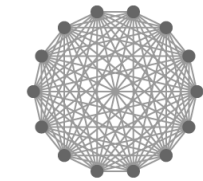
11 people, 55 lines



12 people, 66 lines

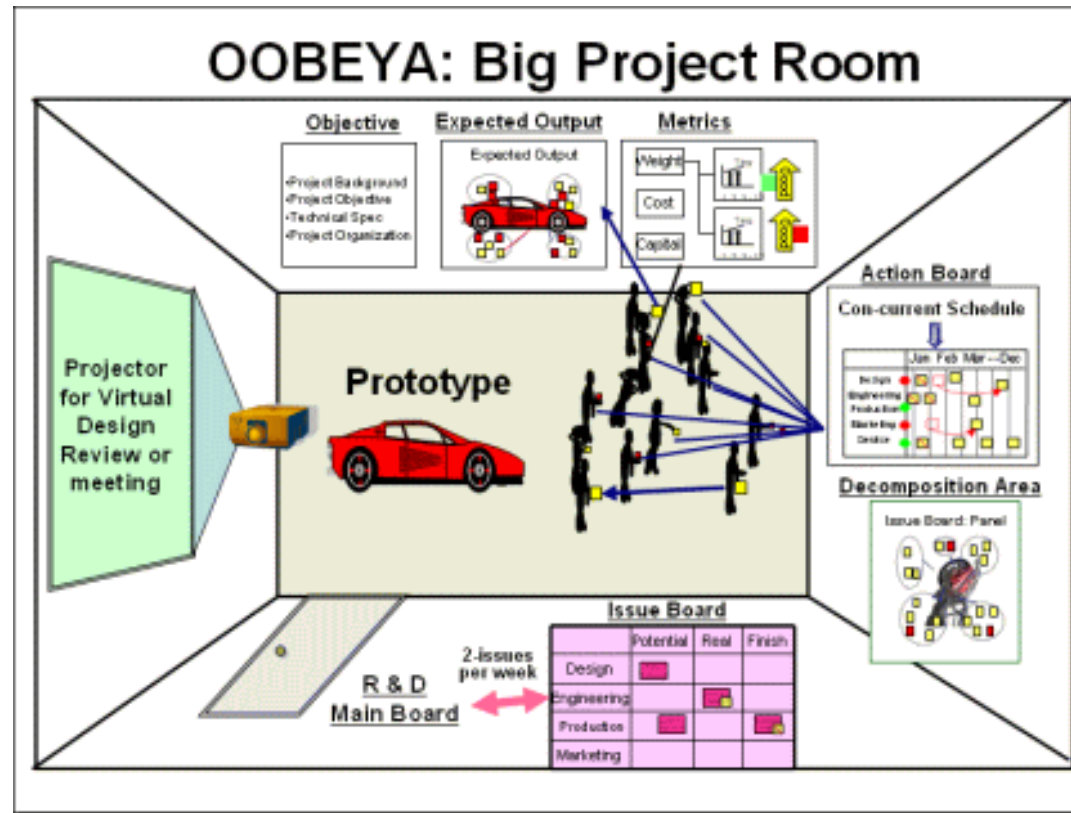


13 people, 78 lines



14 people, 91 lines

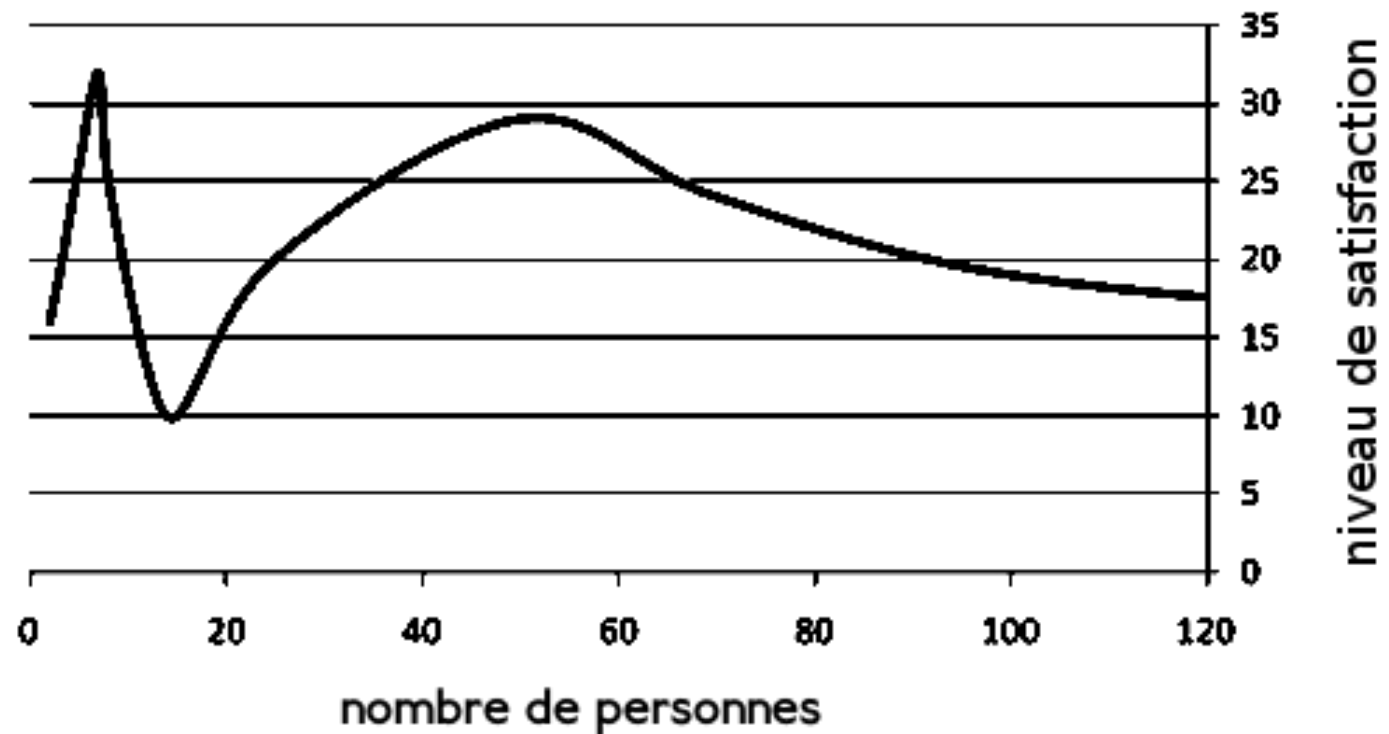
Visual management (obeya)



Memorisation (storytelling)



Social dynamic (size)

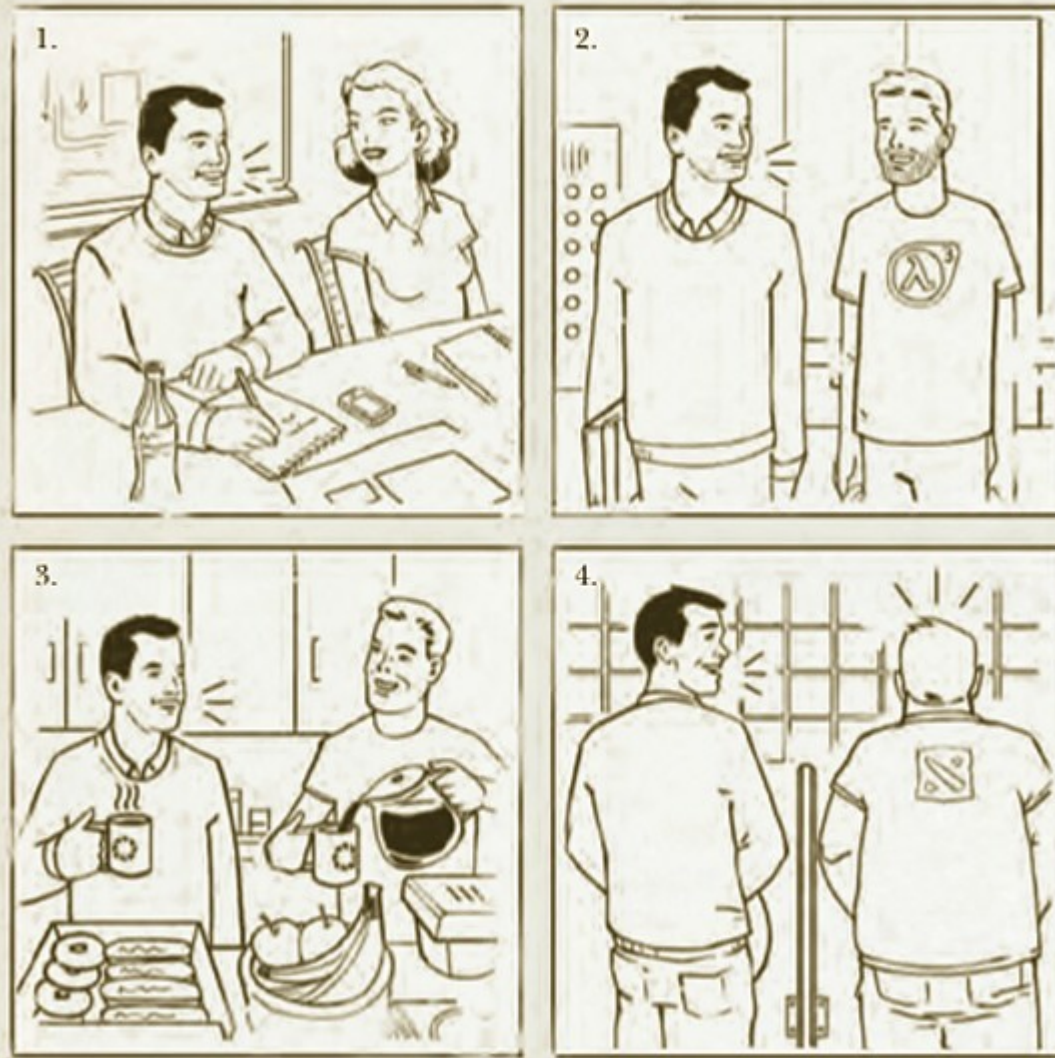


GEMBA

Valve handbook

Gemba
Is one of
the most
powerful
Lean
stance

Fig. 2-4 Methods to find out what's going on



- step 1. Talk to someone in a meeting
- step 2. Talk to someone in the elevator
- step 3. Talk to someone in the kitchen
- step 4. Talk to someone in the bathroom

continuous deformations?

The new world is :

complexity,

frugality (Save the planet)

Immateriality

So much powerlessness we turn to mother nature :

**complexity means think organic
not mechanical**

Do not look for industrialisation

Do not look for the usual repeatability and linearity

complexity means think container
and direction and not process or
target

Repeat the container not the process, complexity
needs innovation

Frugality

Save energy, save the planet Is the new
eliminate waste, to be lazy as nature is lazy



CRYSTAL SAVES ENERGY BY REPEATING CONSTANTLY
THE SAME PATTERN (but never the same crystal)





TERMITE MOUNTS

ARE COMPLEX
EMERGENT SYSTEMS
AND SAVE ENERGY
AS STRUCTURE AS
AN EXTENDED
ORGANISM

Too much constraints

No innovation

Too much hierarchy and silos = no delivery

Too slow between the idea and delivery

Needs freedom, autonomy



Too few constraints

Tedious integration of newcomers

Reinventing the wheel

Duplicate work



Needs communication



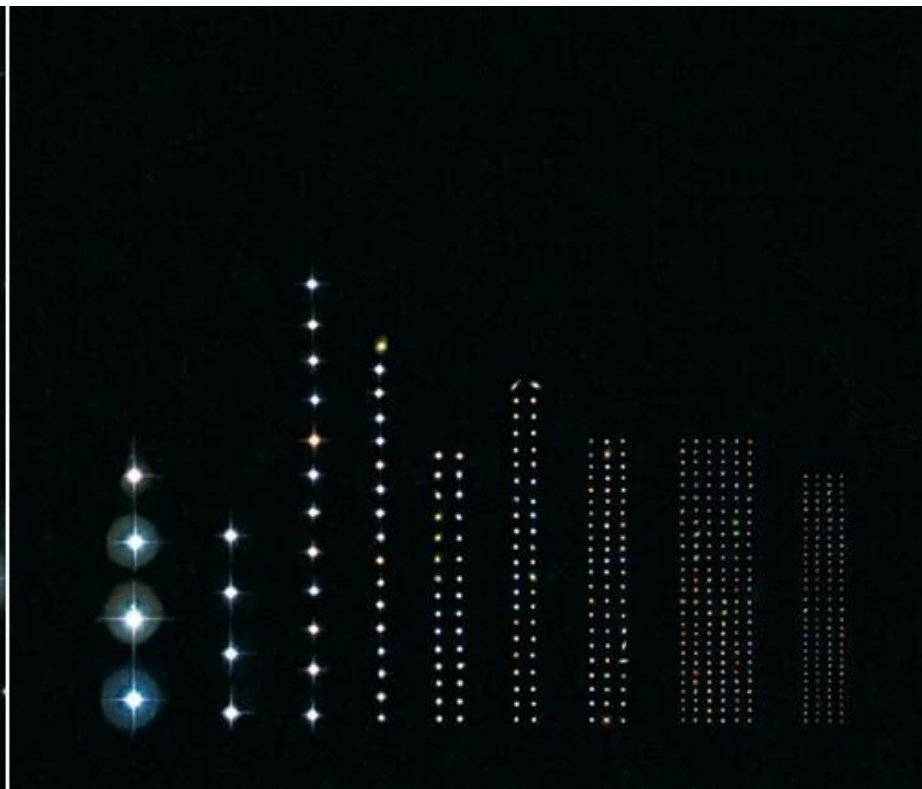
What to do?

The new new
lean company ?

New lean shapes ?



New lean shapes ?



Real organisation ?



Real innovation ?



New lean organigram ?

VALVE ORGANIZATIONAL CHARTS

(AS ENVISIONED BY EMPLOYEES)

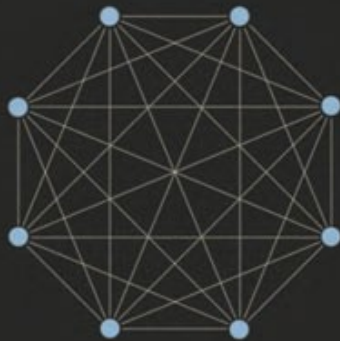
Diag. 1



Diag. 2



Diag. 3



Diag. 4



Diag. 5

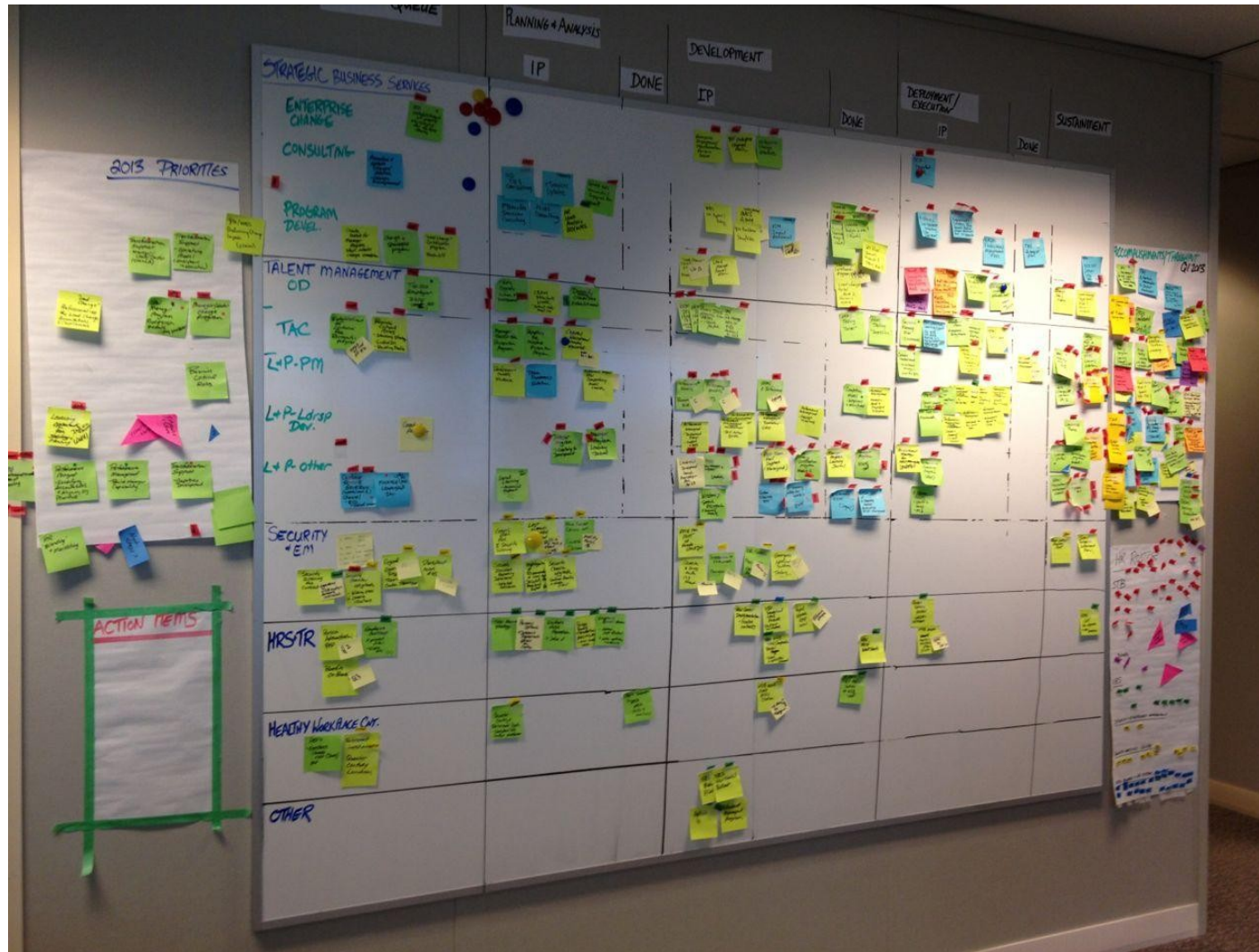


* "I'm the noob, coffee anyone?...Hello?"

Lean interactions : stigmergy



Kanban is stigmergy



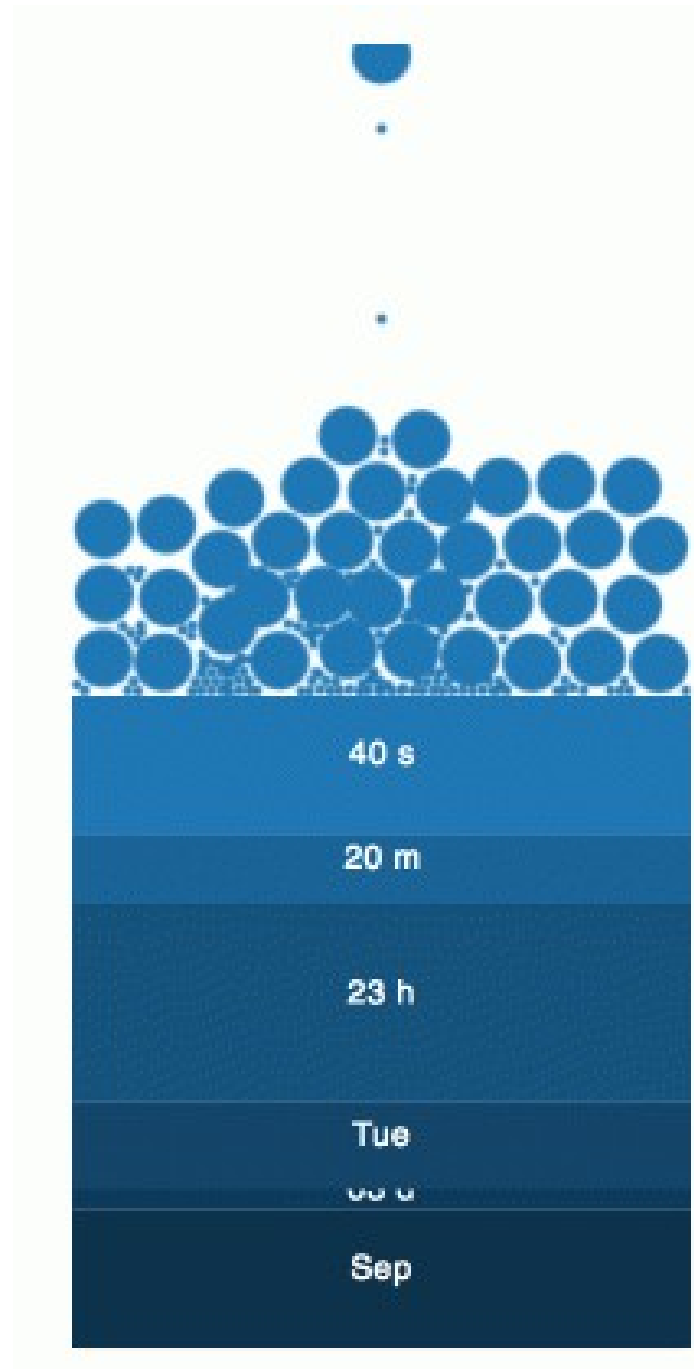
Kaizen are stfigmergy



...I mean Change...

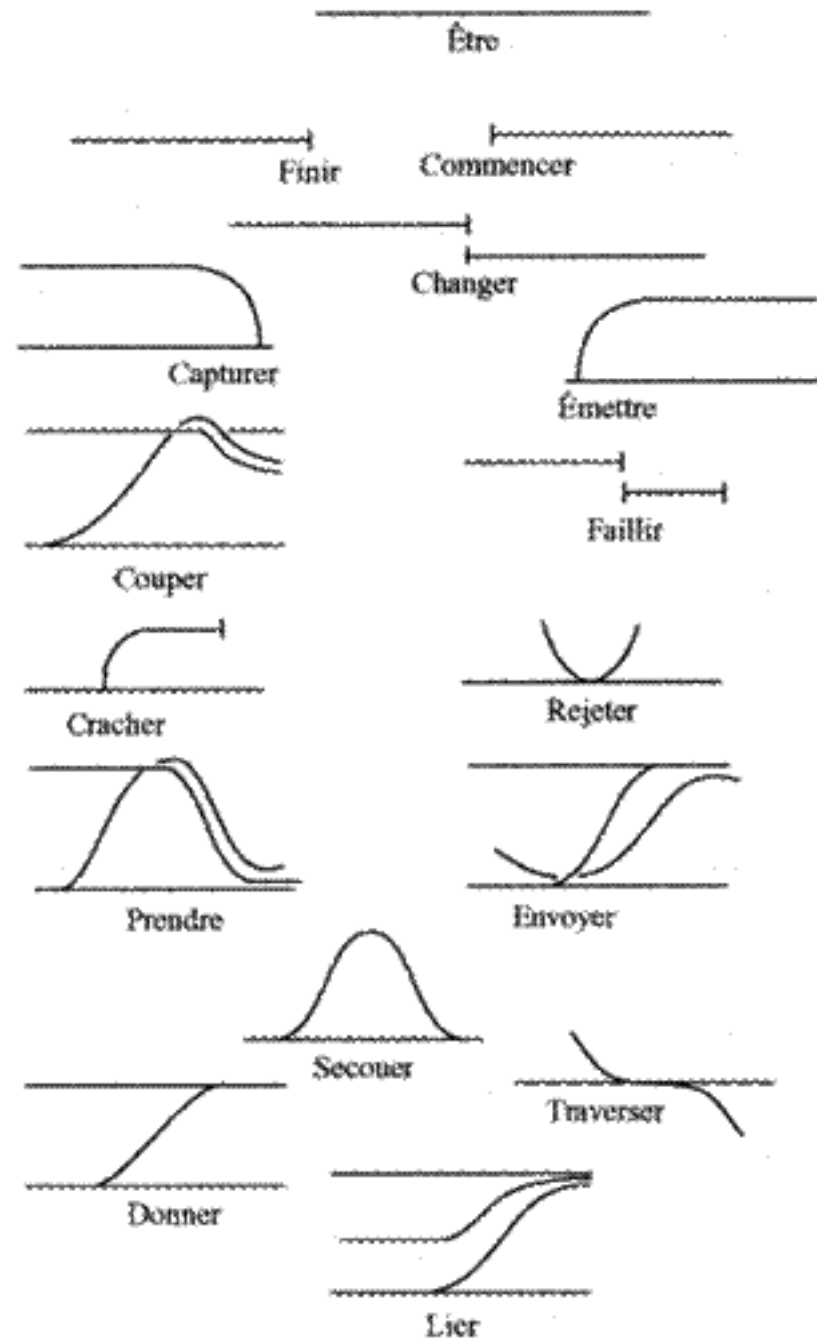
New lean visualisation

Visualsedimentation.org



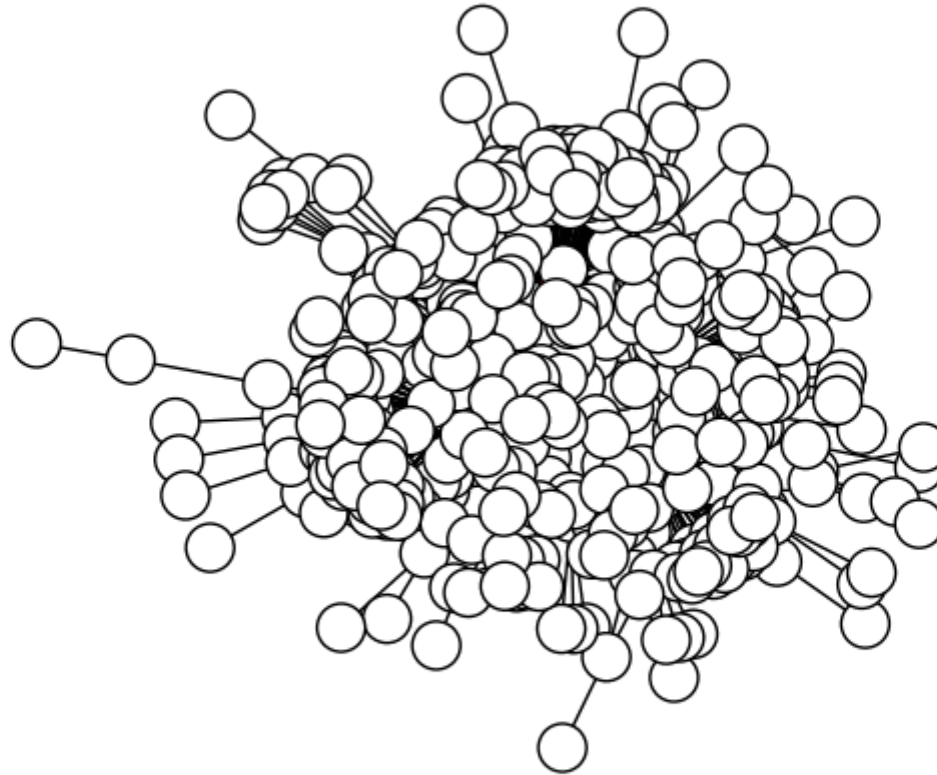
New lean Dynamics?

Thom
catastroph's theory

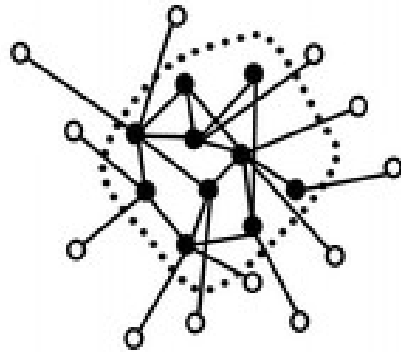


New lean propagation ?

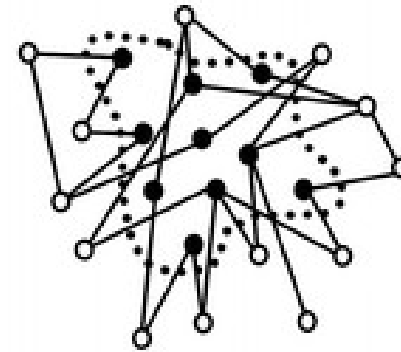
Simulation of agent-based simple SIR
time = 0



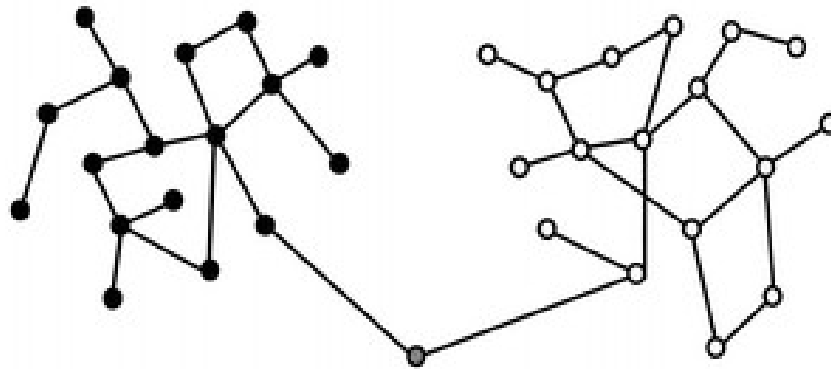
New lean propagation?



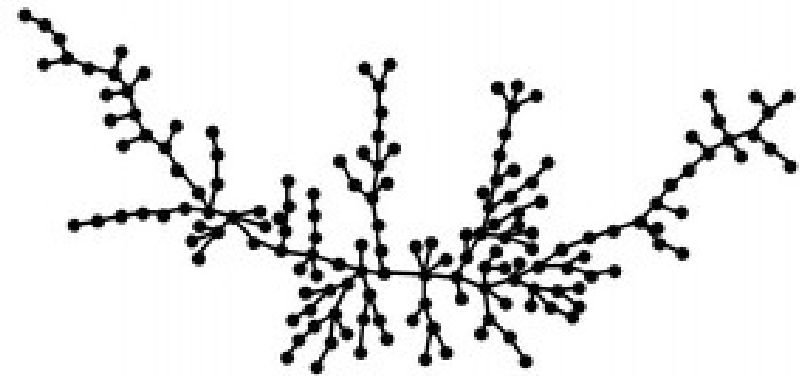
Panel A: Core Infection Model



Panel B: Inverse Core Model



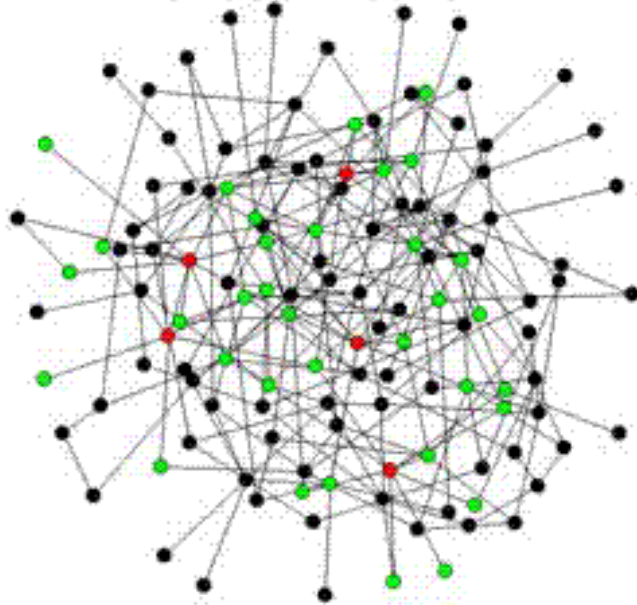
Panel C: Bridge Between Disjoint Populations



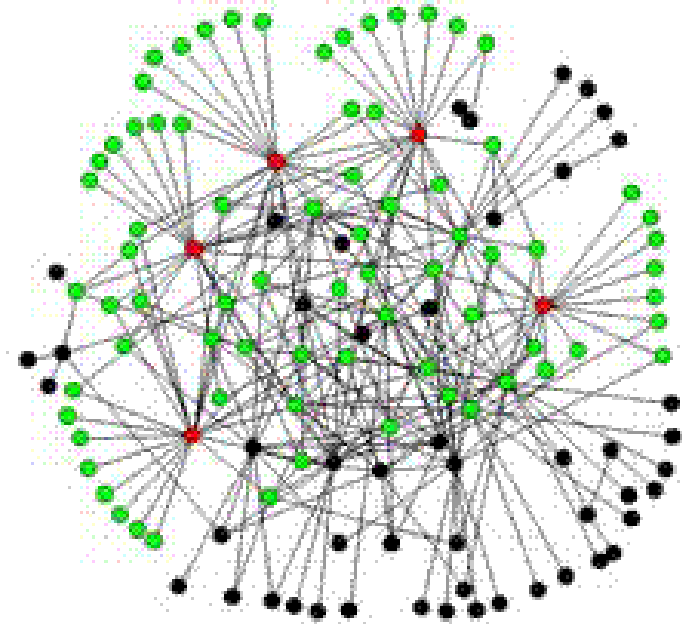
Panel D: Spanning Tree

New lean repeatability?

random network

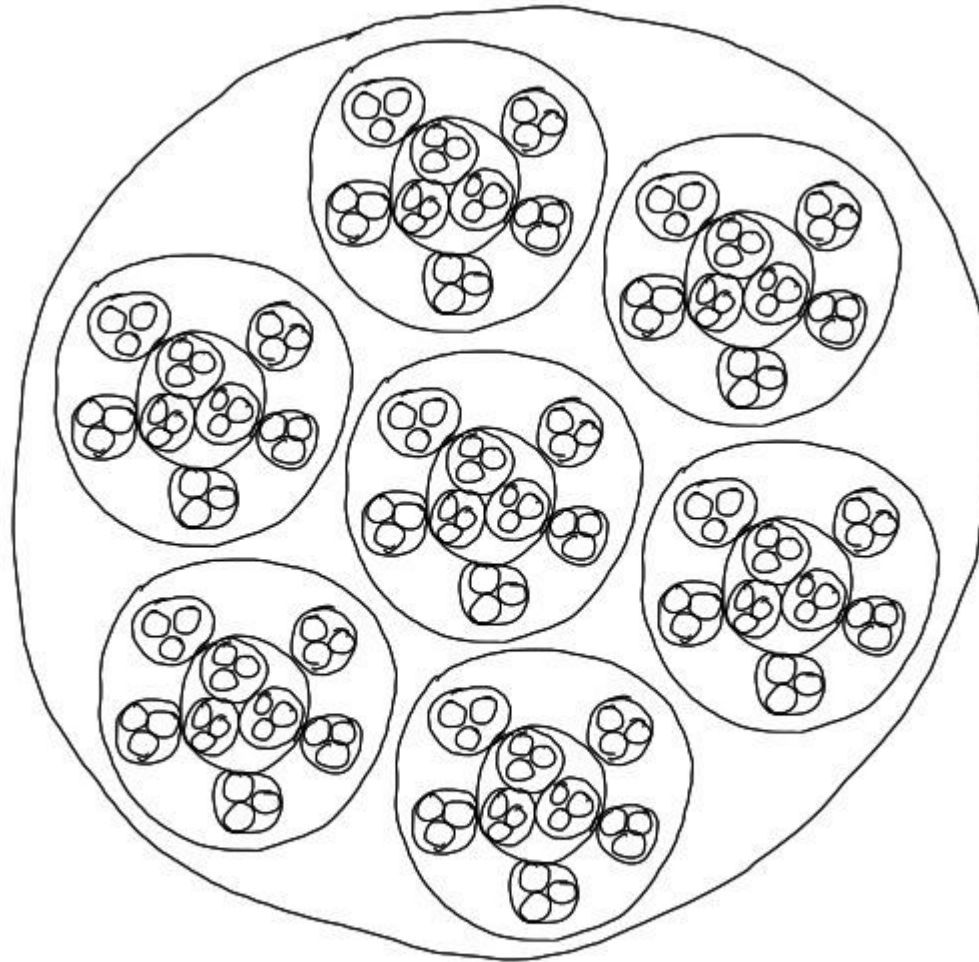


scale-free network



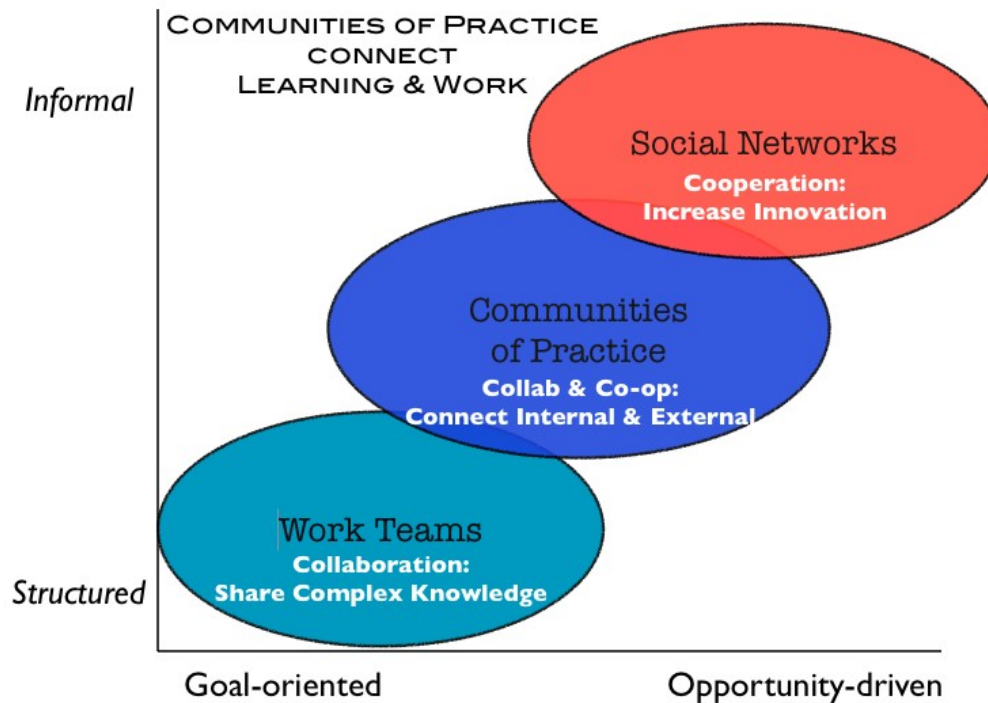
New lean repeatability?

you repeat the container and the direction not the result, not the process

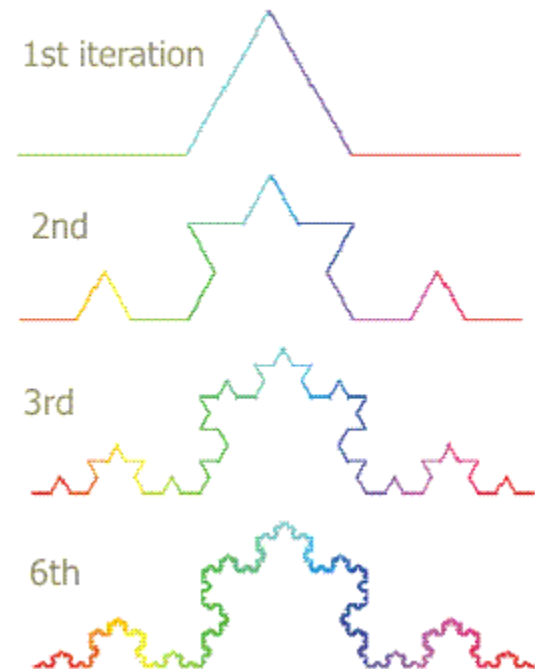


FRACTAL ORG CHART

New lean repeatability?



fractal Koch curve



New lean architecture?

conway's law // Microservices

1990s and earlier

Coupling

Pre-SOA (monolithic)
Tight coupling



2000s

Traditional SOA
Looser coupling



2010s

Microservices
Decoupled



Wikispeed

re-think the supply chain



3D PRINTER

re-think the material



IMMATERIALITY

re-think gembira (see and hear)

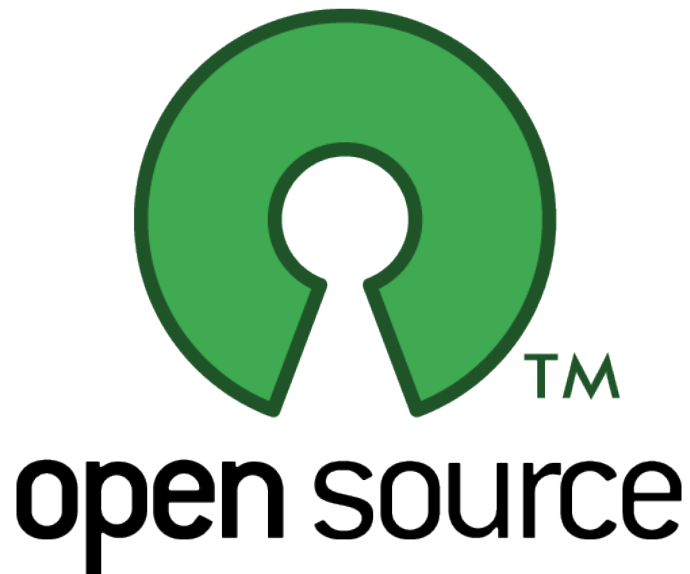


IMMATERIALITY

Summit

Dispersed versus distributed teams

Trust equality



Where we work

our headquarters is the internet.

If you have a wifi connection, we have an office near you.

We're a distributed team working online from all corners of the planet. We don't care about counting the number of hours you spend in a chair at a desk

in a small room each week. You can live wherever you want, and work however you like. As long as you're online, you can be "at work".

Ghost.org

The new new lean company ?

Be organic not mechanical

Set a container and a direction

Rethink and focus on your space and (im)material



benext
be your potential

THANK YOU

Pablo pernot

<http://areyouagile.com>

<http://benextcompany.com>