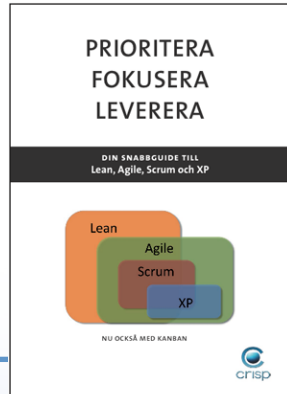
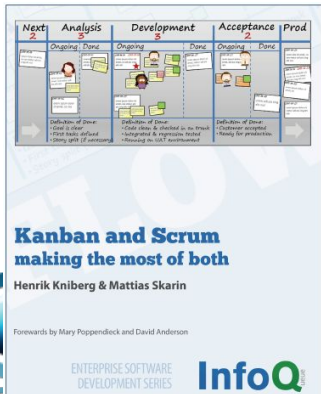
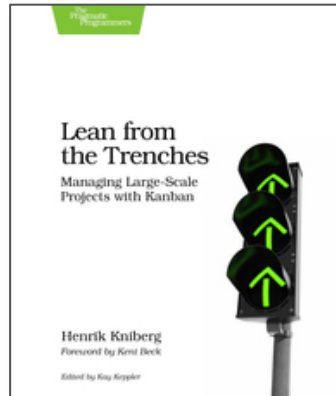
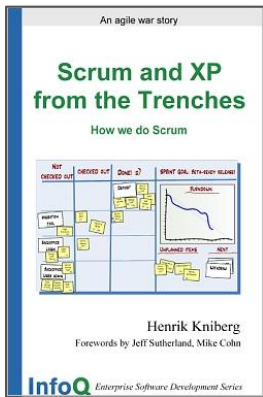


Software Development and Tragedy of the common



Crisp is an employee owned company known for agile courses with internationally renowned teachers and experienced agile developers and coaches.



<http://blog.crisp.se>

Crisp's Blog

from the Crisp Consultants

« Using CloudBees for teaching XP practices

JavaScript Development – A Year Later »

Advanced Agile with Alistair Cockburn, Oct 1-2

Subscribe to Henrik's RSS feed



Posted on September 10, 2012 by Henrik Kniberg

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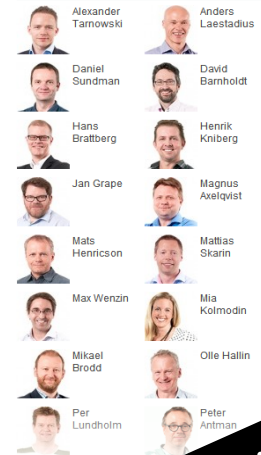
On Oct 1-2 Alistair Cockburn is in Stockholm teaching *Advanced Agile* together with me. He has been here twice before and course reviews have been great! Alistair has a very pragmatic down-to-earth style, while maintaining the theoretical depth needed for an advanced course. He's not only a Fun Guy, he's the guy who (literally) wrote the book on *Agile Software Development*, and co-created the agile manifesto!

Join us!



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Blog Authors



www.crisp.se

WHO AM I?

Peter Antman

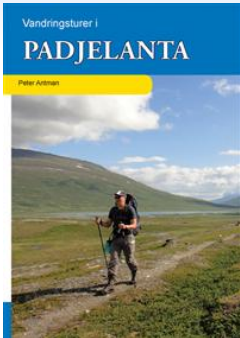
0760 140 150

peter.antman@crisp.se

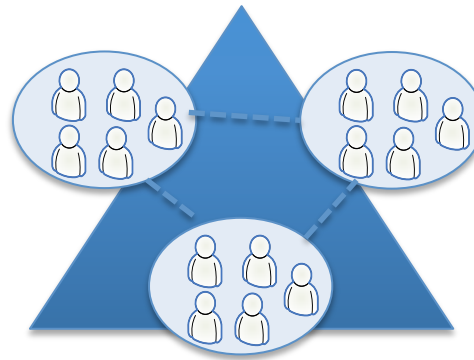
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~~Un-~~Management consulting



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polopoly

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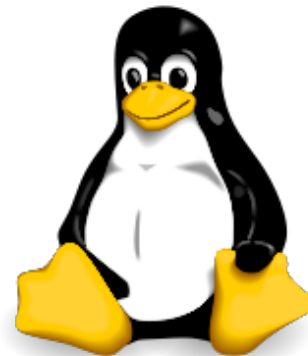
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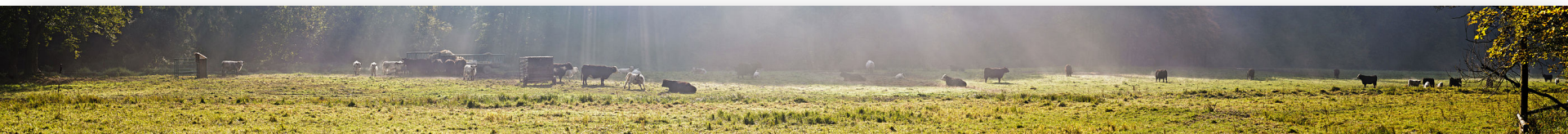
Peter Antman

Code is a "common"

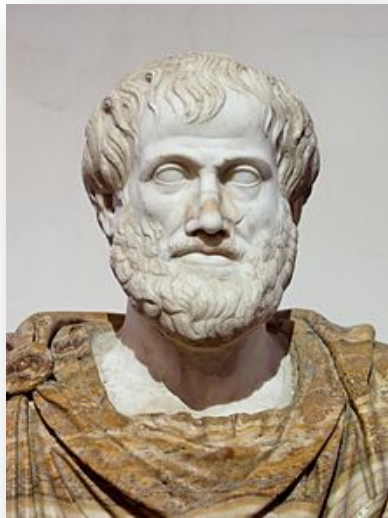
$$E = mc^2$$







"For that which is common to the greatest number has the least care bestowed upon it. Every one thinks chiefly of his own, hardly at all of the common interest; and only when he is himself concerned as an individual."*

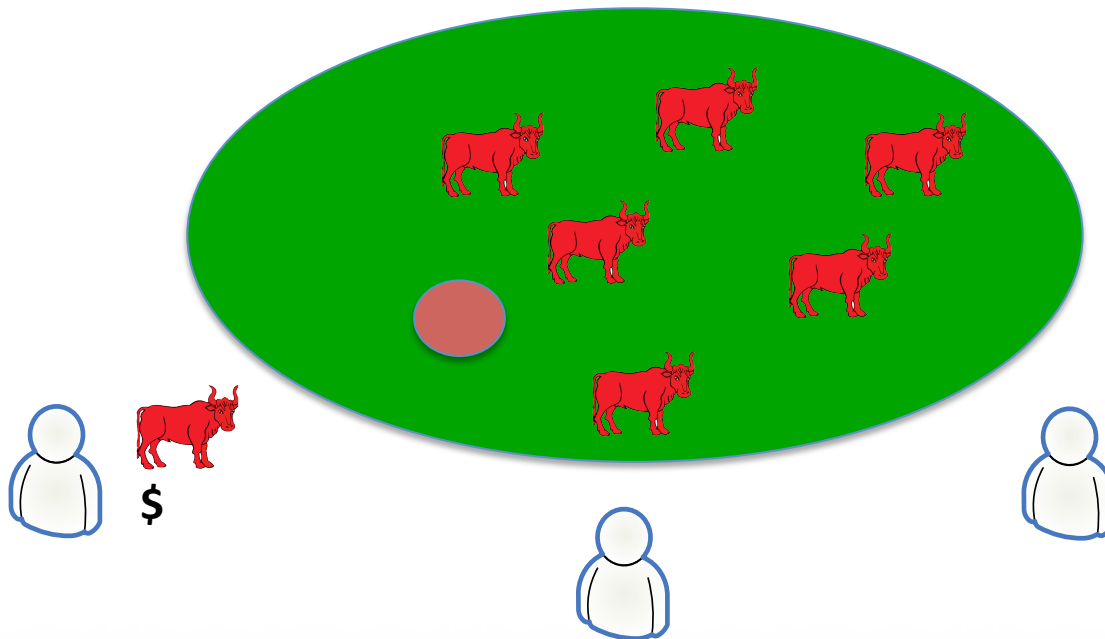


Aristoteles

* Ju fler som har något gemensamt, desto mindre omsorg kommer man ägna det. Man bryr sig mest om ditt eget och mindre om det som är gemensamt, förutom i den utsträckningen det har konsekvenser för en själv"

The Tragedy of the commons

"Ruin is the destination toward which all men rush, each pursuing his own best interest in a society that believes in the freedom of the commons"



Garret Hardin,
professor of biology,
1968



Game Theory



John von Neuman,
mathematician.

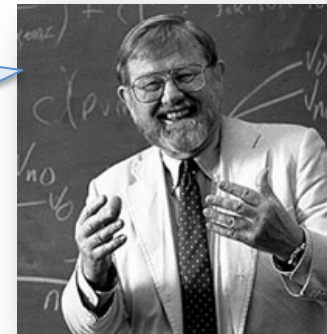


Collective Action

Free Rider



*"rational, self-interested individuals
will not act to achieve their common
or group interests"*



Mancur Olson,
Economist.

Markets or democracy as solutions?

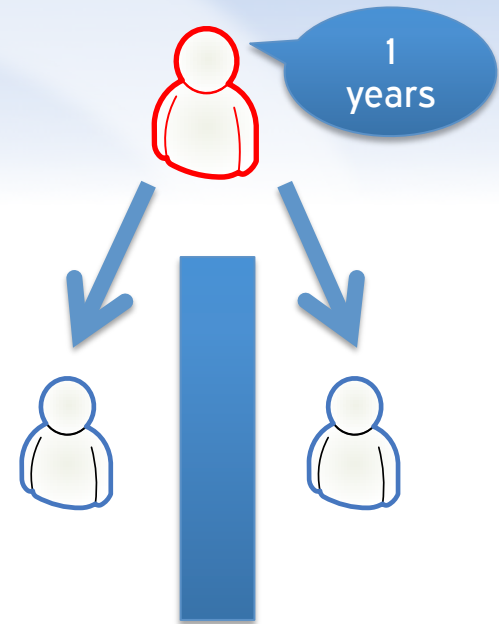


Problems

- Transaction costs
- Property rights
- Social dilemmas
 - Information asymmetries
 - Monopolies
 - External effects

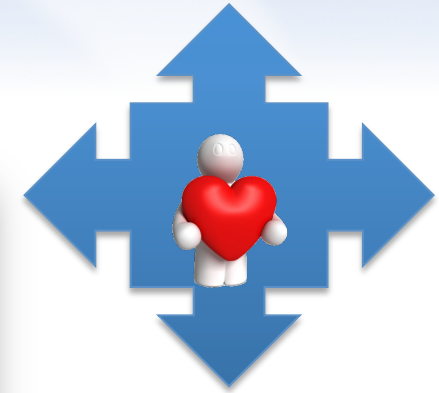
"if ruin is to be avoided in a crowded world, people must be responsive to a coercive force outside their individual psyches, a 'Leviathan,' to use Hobbe's term"

Hardin, 1978



"Hierarchy is the price people may choose to pay for efficiency in groups"
Gary J. Miller 1992 (p25)

When centralization fails



"Centralized dictatorship is untenable because of its failure to generate sufficient diversity and sufficient problem solving strategies"
Gary J. Miller 1992



We have solved collective action problems again and again



Part of being human

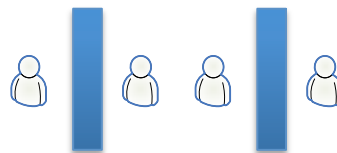
Common patterns

- Conditional cooperation
- Punish free-riders even when costly
- Partner choice

- Empathy
- Intentions
- Symbols
- Language
- Norms

Tit-for-tat

Be nice – but not naive



Solves prisoners dilemma

Elinor Ostrom



"What is missing ... is an adequately specified theory of collective action whereby a group of principals can organize themselves voluntarily to retain the residual of their own effort"

p24-25





Common Pool Resource

- costly, but not impossible, to exclude potential beneficiaries
- face problems of congestion or overuse because they are subtractable

Problems

- Congestion
- Overuse
- Pollution
- Destruction



8 design principles to handle common pool resources

1. Clearly defined **boundaries**
2. Rules for usage and maintenance are adapted to **local conditions**
3. Users can **participate** in the decision-making process
4. Effective **monitoring** by users them selves
5. **Graduated sanctions** built into the system
6. Mechanisms of **conflict resolution** that are **cheap** and of easy access
7. Self-determination of the community **recognized by higher-level authorities**
8. In the case of larger common-pool resources, organization in the form of **multiple layers** of nested enterprises, with small local CPRs at the base level

Elionor Ostrom

8 principer för att hantera gemensamma resurser

1. Klart definierade gränser för resursen
2. Reglerna för utnyttjande och underhåll av resursen är lokalt anpassade och utformade
3. De flesta som påverkas av reglerna kan vara med och besluta om reglerna
4. Övervakning sker av användarna själva
5. Sanktioner är billiga, inbyggda i systemet och sker av användarna själva
6. Det finns mekanismer för konfliktlösning som är lokala och "billiga"
7. Användarna utformar själva och gemensamt reglerna utan att ifrågasättas av någon extern auktoritet
8. Skalas ut genom multipla lager av nästlade enheter

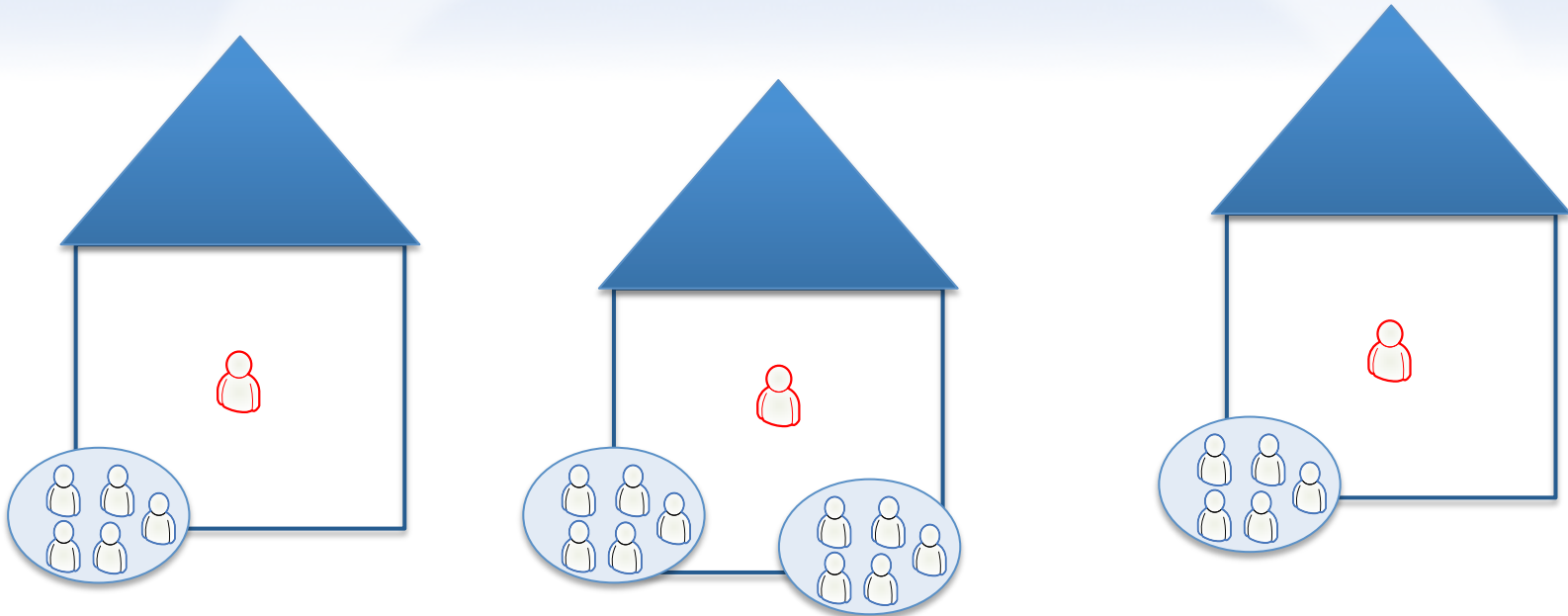
Code as the “tragedy of the commons”



Code as a common resource

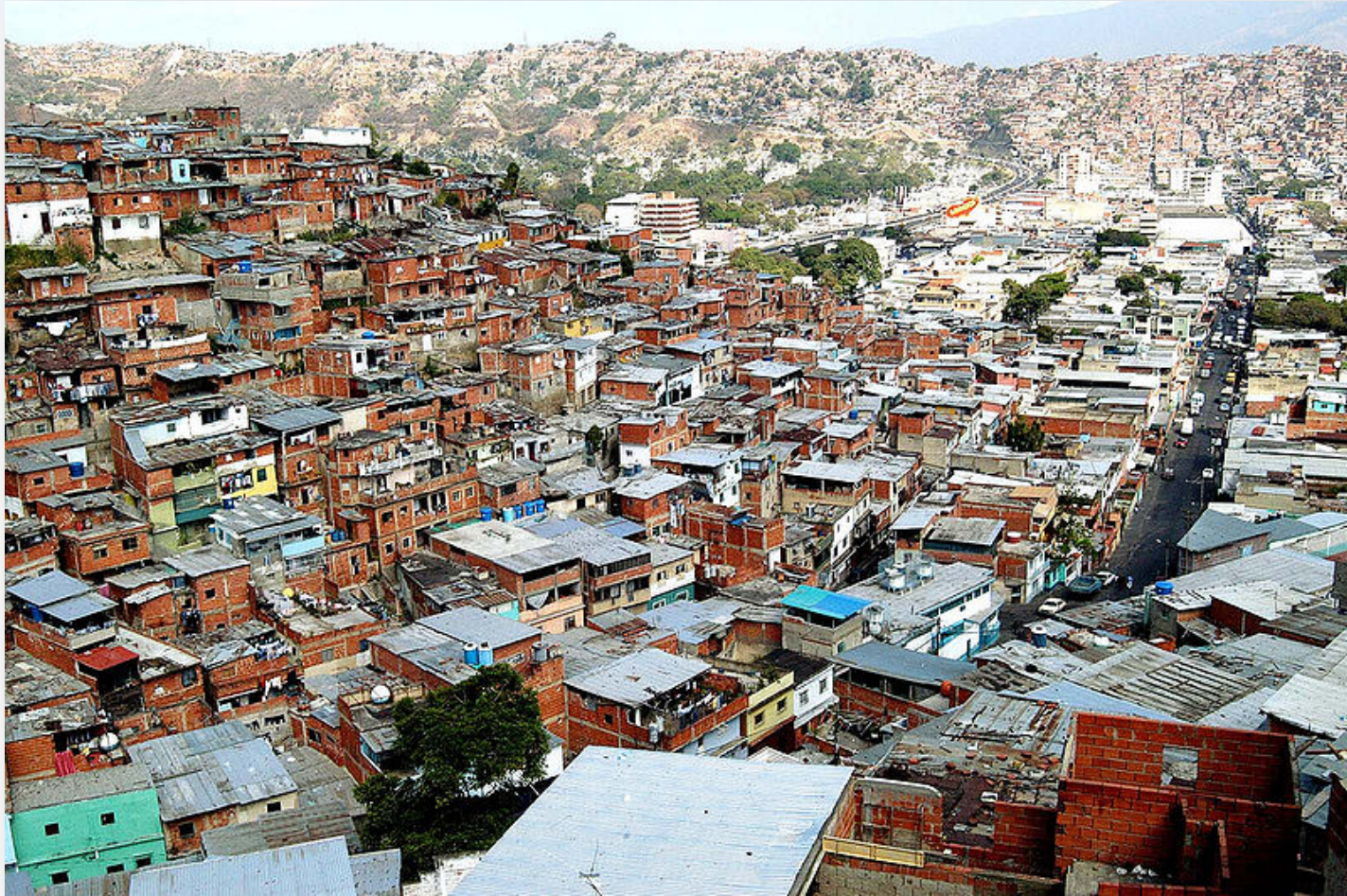
- A mix of “public good” and “common pool resource”
 - Low possibility (or gain) to shut others of
 - My usage of the resource does not stop others from using it (public good)
 - My add-ons (satisfying my need) effect others, positively and negatively (subtractable, common pool)
 - The side effect of my actings does not only effect me (external effects)
 - Looking only at my needs may lead to to low investments
 - Functions needed by others never made
 - Technical dept.
- Needs collective care to be sustainable

Much like growing a village

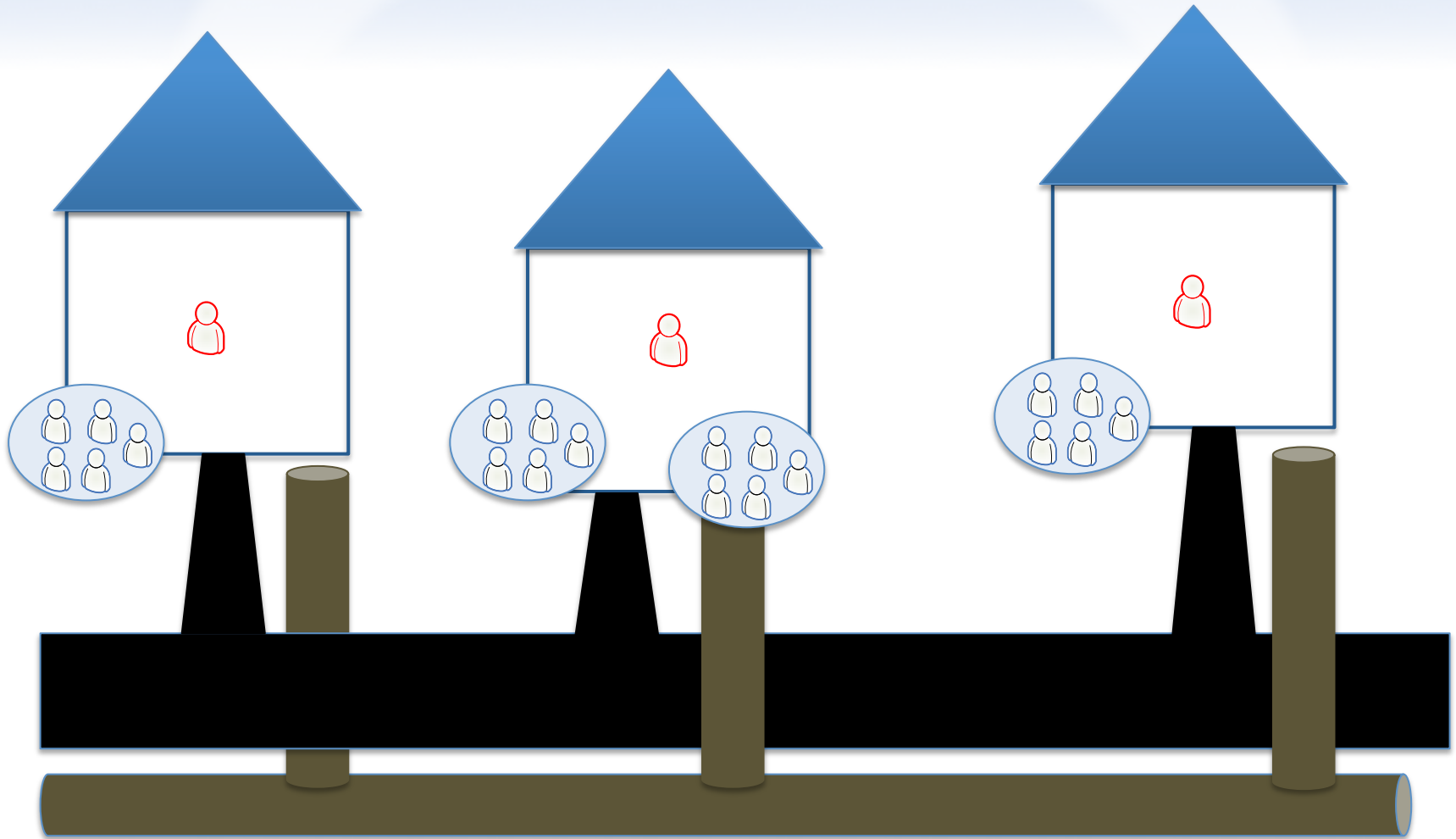


Everyone focuses on its own house

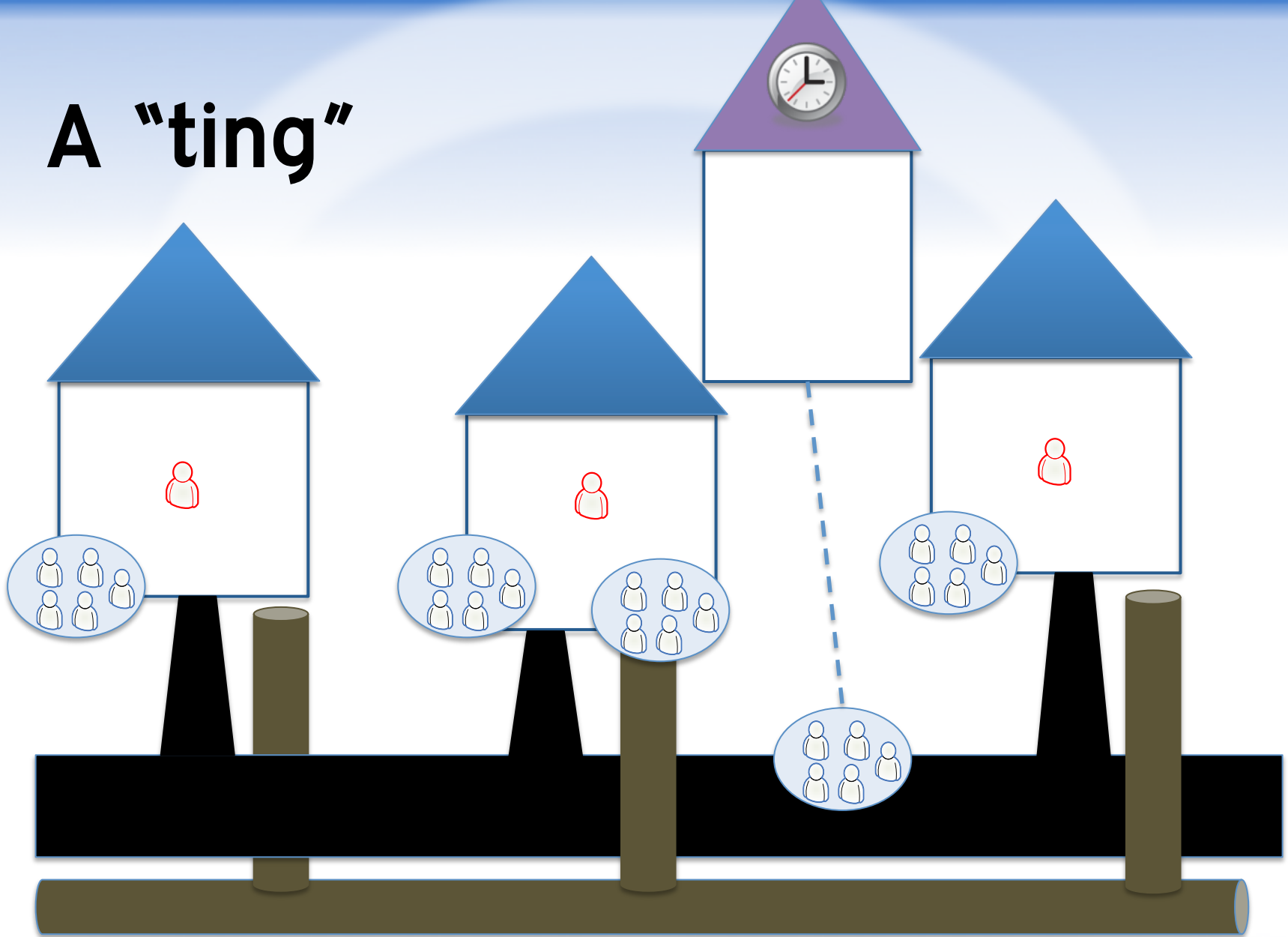
What might happen in the long run?



Need to care for common stuff



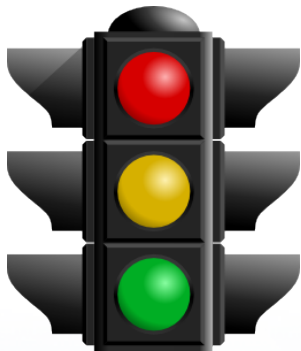
A "ting"



Handling of code need to follow the Orstrom principles



- There must be rules
- Rules must be decided by the coders
- There must be some sanctions/feedback when not following the rules
- Sanctions/Feedback must be build in to daily work



Every one must share the cost of tendering the common resource

We have solved collective action problems again and again



Part of being human

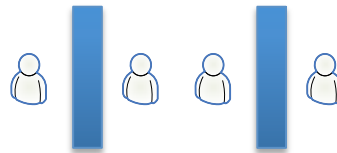
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