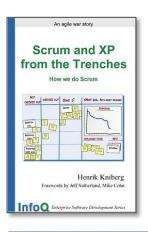
Software Development and Tragedy of the common



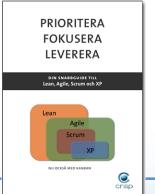


Crisp is an employee owned company known for agile courses with internationally renowned teachers and experienced agile developers and coaches.









http://blog.crisp.se



WHO AM 1?



Peter Antman

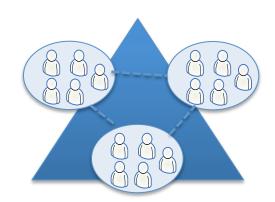
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Warragement consulting



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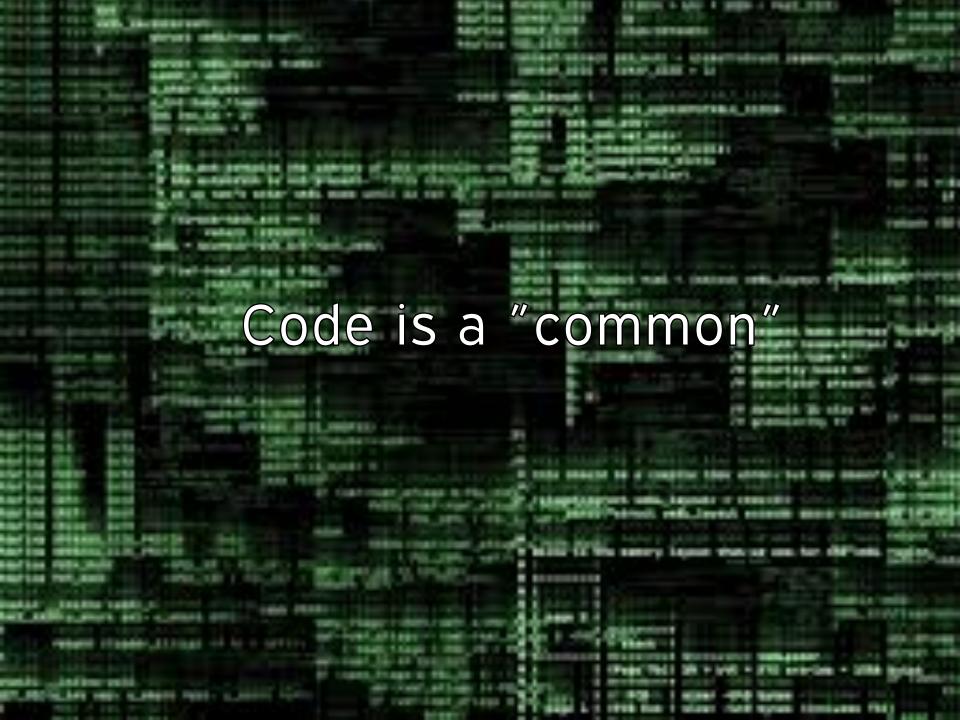




















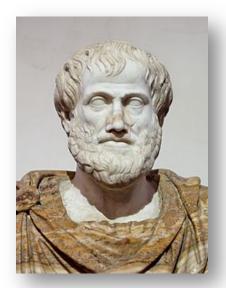








"For that which is common to the greatest number has the least care bestowed upon it. Every one thinks chiefly of his own, hardly at all of the common interest; and only when he is himself concerned as an individual."*



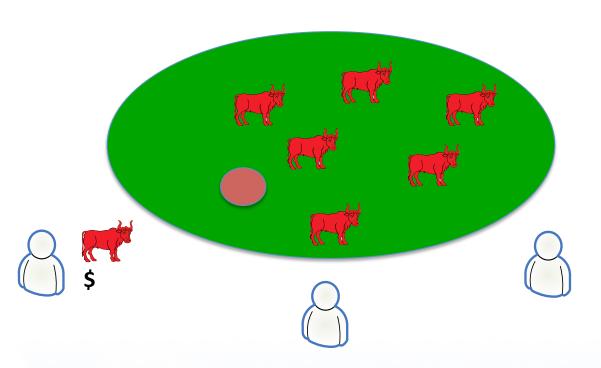
Aristoteles

* 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 Tradgedy 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

The Tragedy of	the Commons	for the greatest rearder? In realized? Nofor two reasons, each suffici stell. The first is a theoretical one, it
Gamett Hardin		mathematically people to maximize (or most) variables at the same time
_		Magazina (3), but the principle is a in the though of metal differential ass
		duting back at least to EVAlumber 1202).
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empopular scientific pursuls to that the redden under discussion has a technical	position are trying to find a was to avoid the order of communication without relie-	must do: We must stake the work
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there is been related about morally. In our do (though not to carbo time)	show how that the solution they wok cannot be found. The population position	population alone and manimize feathern's goal is responsible.
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	Population, as Multi-aread, controlle took	
the natural wiscom. They continuely qual- tical their statement with the chose. To be	to gow "geometrically," or, as we would now are represented to be a finite world	polition of the ampinious of energy placed by the moliton of its dusing
Whether they were right or not is not the concern of the present article, Rather, the	world's greate most steadily decrease. In our a facts world	withoute signs in the analysis as were, revened, but Bootham's goal
of a class of human politicas which can be realled for technical solution continue.	view that the world treatments; or that we do not know that it is not. But, in home of the	The options population is, the the numbers of the first pro-
	next for presenting with the forestable technology, it is clear that we will require	know, no one has surpody task redden. Exaching an arrestable as
tion and discussion of one of those.		
tion and discussion of one of these. It is easy to show that the class is not a self class. Recall the passe of tick-tack-		
It is seen to show that the clean is not a self class. Recall the passe of task-task- tes. Consider the neithers. They can I	bureau human minory if we do not, during the improduct future, among that the world	
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Game Theory



John von Neuman, mathemathican.

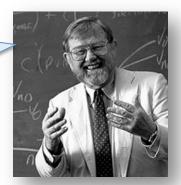
Free Rider





Collective Action

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



Mancur Olson, Economist.



Markets or democracy as solutions?





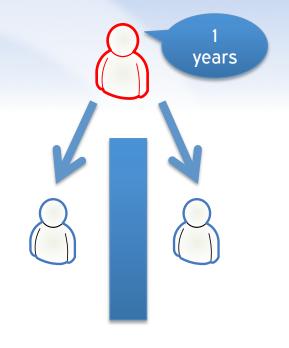
Problems

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



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"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

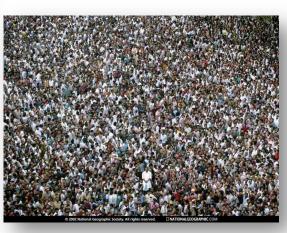




"Hierarchy is the price people may choose to pay for efficiency in groups" Gary J. Miller 1992 (p25)

When centralization fails







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











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We have solved collective action problems again and agin



Common patterns

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

Tit-for-tat

Be nice – but not naive

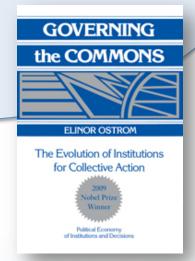


Solves prisoners dilemma

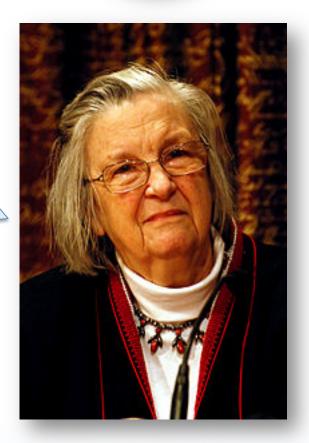
- Empathy
- **Intentions**
- Symbols
- Language
- Norms

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
- 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
- Self-determination of the community recognized by higher-level authorities
- 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

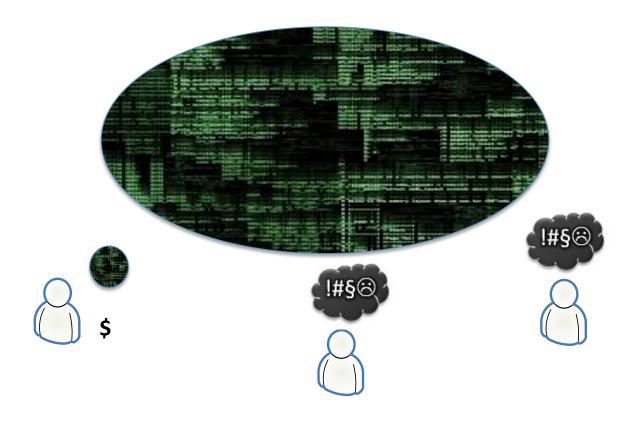


8 principer för att hantera gemensamma resurser

- 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. Overvakning sker av användarna själva
- Sanktioner är billiga, inbyggda i systemet och sker av användarna själva
- 6. Det finns mekanismer för konfliktlösning som är lokala och "billiga"
- 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"





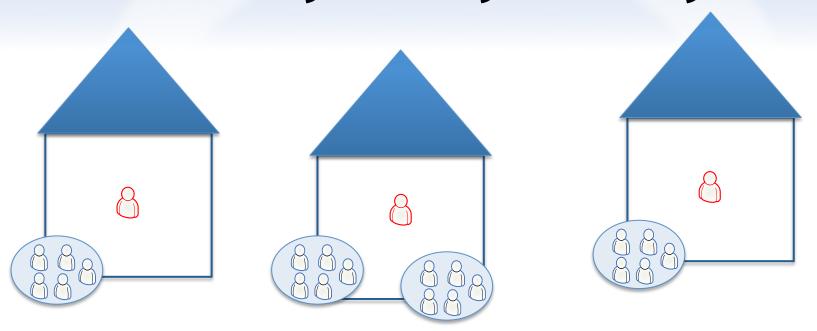
20

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



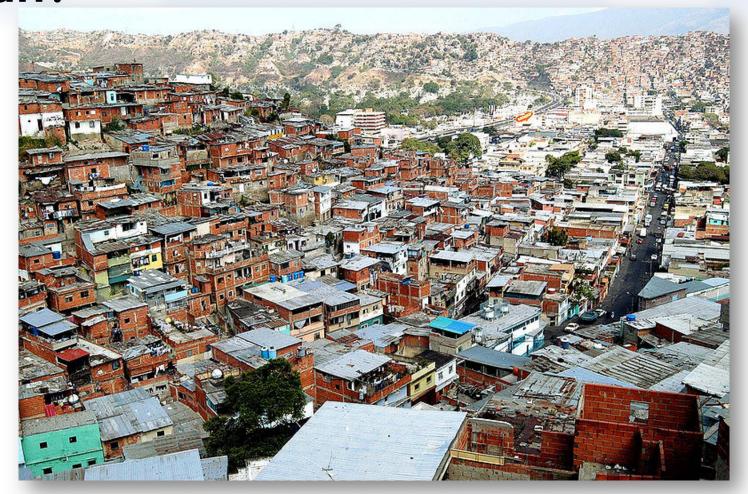
Much like growing a village



Everyone focuses on its own house



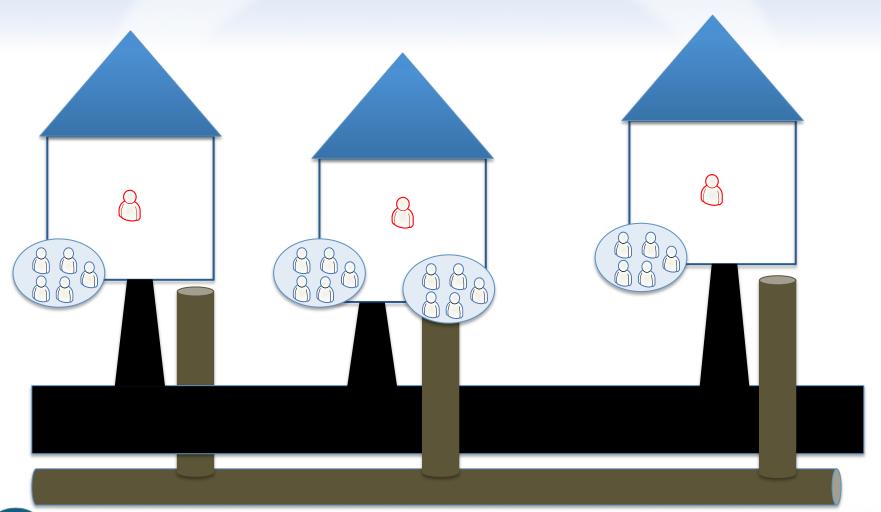
What might happen in the long run?



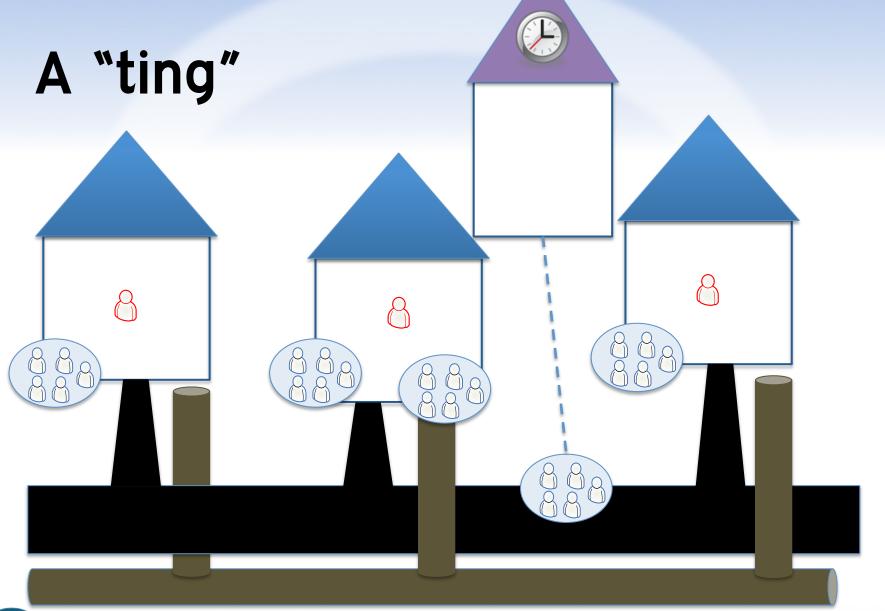


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Need to care for common stuff









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 agin

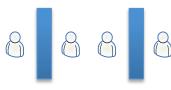


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