


**Software Teaming
And the Power of Flow**



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Softwareteaming.org
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Twitter: @WoodyZuill

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**“The value of
another’s experience
is to give us hope,
not to tell us how
or whether to proceed.”**

Peter Block

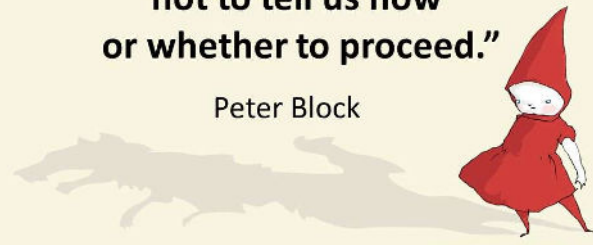



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**A Rapid Introduction to
Software Teaming
A Whole Team Approach**



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Software Teaming

**All the brilliant minds working together
on the same thing...
at the same time...
in the same space...
at the same computer...**

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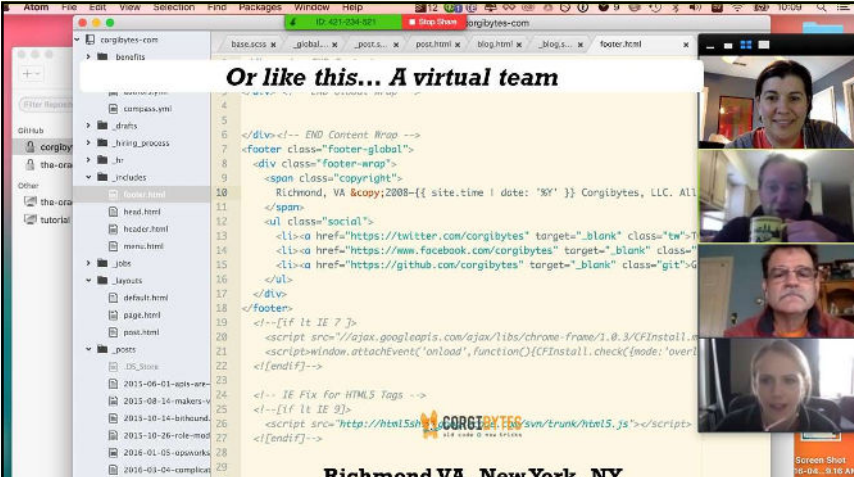


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Or like this... A virtual team



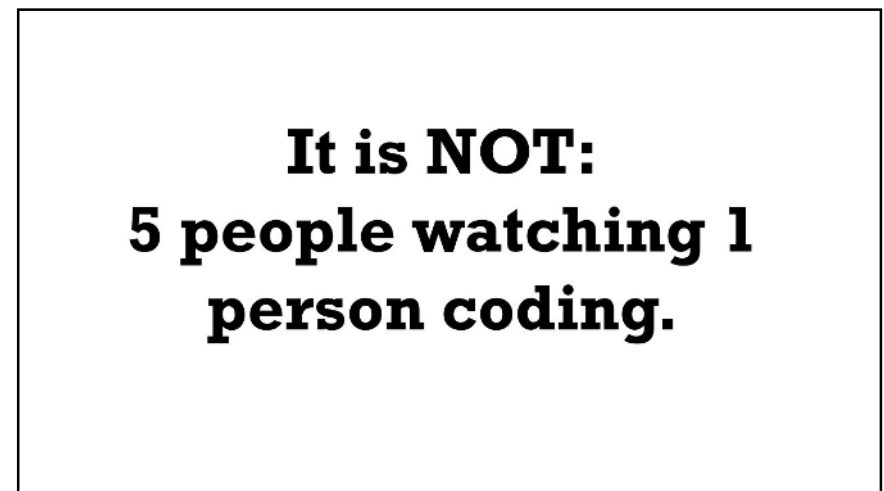
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10   Richmond, VA &copy;2008--[[ site.time | date: '%Y' ]] CorgiBytes, LLC. All
11 </span>
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27 </script>
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29
30

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Richmond VA, New York, NY

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Driver/Navigators



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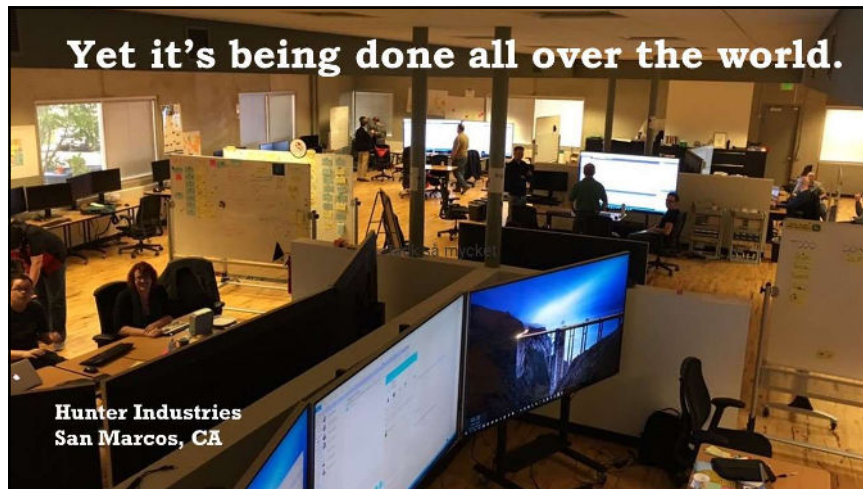
This seems preposterous

Definition:

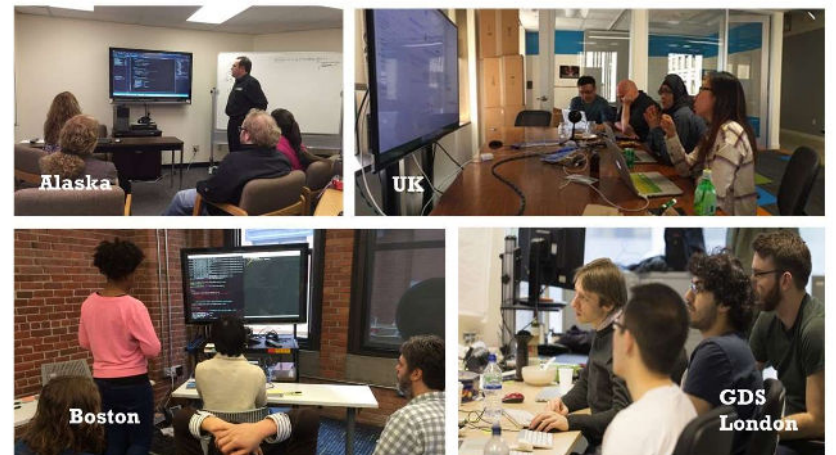
Contrary to reason or common sense; utterly absurd or ridiculous.

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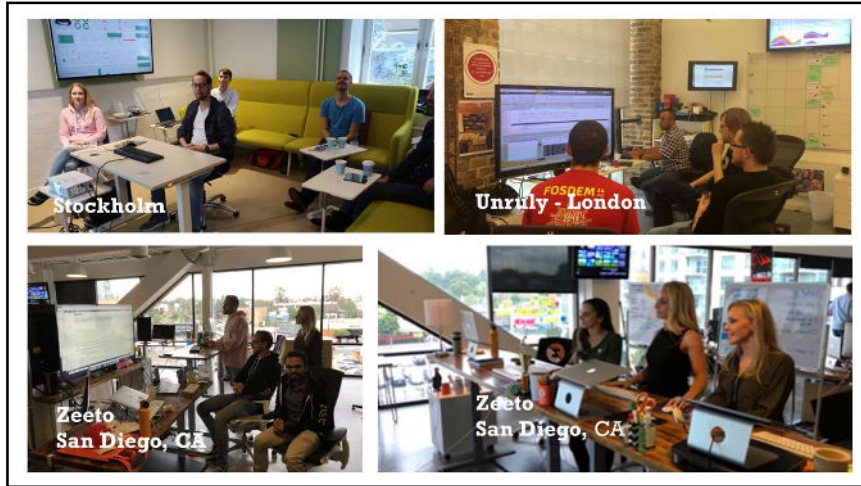
Yet it's being done all over the world.



11



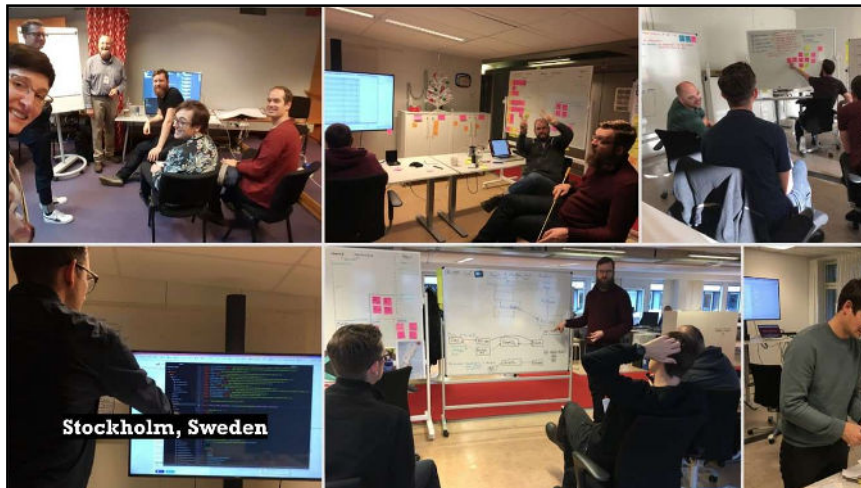
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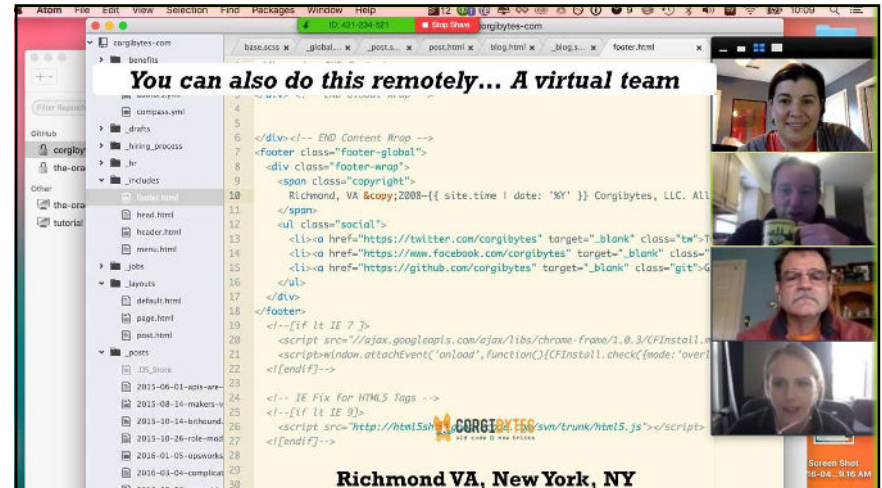
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Why would we work this way?



18

Why would we work this way?

- Knowledge sharing
- Continuous code and design review
- Many perspectives on the work
- Rapid feedback
- We Focus on the right things
- Enhance flow of the work
- Eliminate queues and reduce inventory
- Better solutions
- Higher quality
- More fun, less stressful, more engaging... etc.

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Why would we work this way?

Because the team decided to.



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When I share
Software
Teaming this
question is
almost
always
asked:



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**How can you be productive
with 5 people at one computer?**



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I don't know. Does that matter?

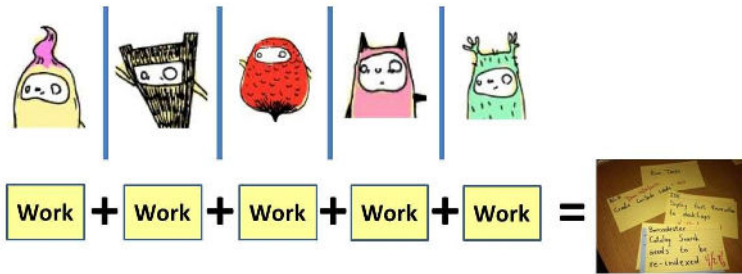


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**We were paying attention
Here is what we noticed**

24

Working Separately



25

But working together



26



**Not just more stuff
The more meaningful stuff
It was better done
And of higher quality**

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**“A system is not the sum of the
behavior of its parts,
it’s the product of their
interactions.”**

Russel Ackoff

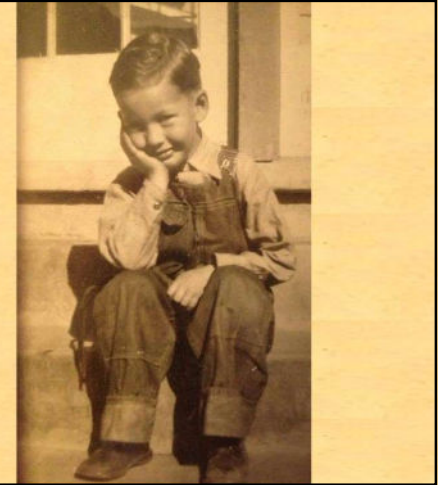
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How can we be productive with 5 people at one computer?



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“A good question isn’t for answers... it’s for finding a better question”



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I wanted a better question



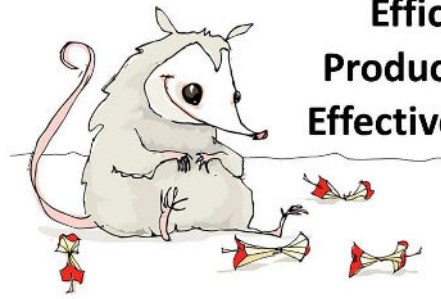
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How can we be **PRODUCTIVE** with 5 people at one computer?



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About Productivity



Efficiency
Productivity
Effectiveness

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Condensed:

Efficiency = Utilization

Productivity = Getting things done

Effectiveness = Getting right things done

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Why I'm after effectiveness:

Efficiency: Busywork

Productivity: Wrong things

Effectiveness: Right things

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How can we be ~~productive~~
with 5 people at one computer?



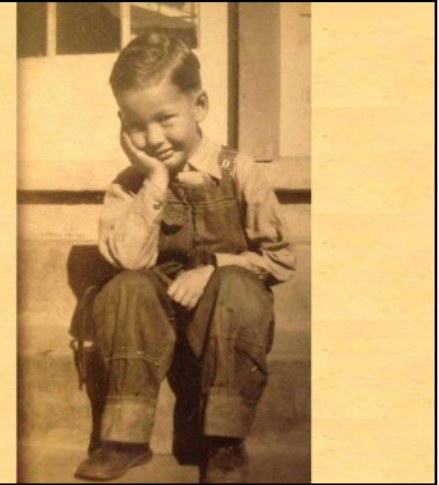
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**How can we be effective
with 5 people at one computer?**



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**I still
wanted
a better
question**

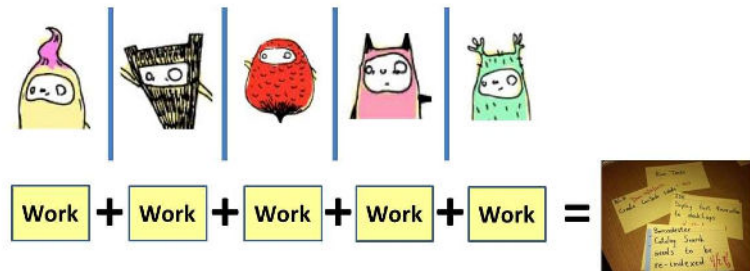


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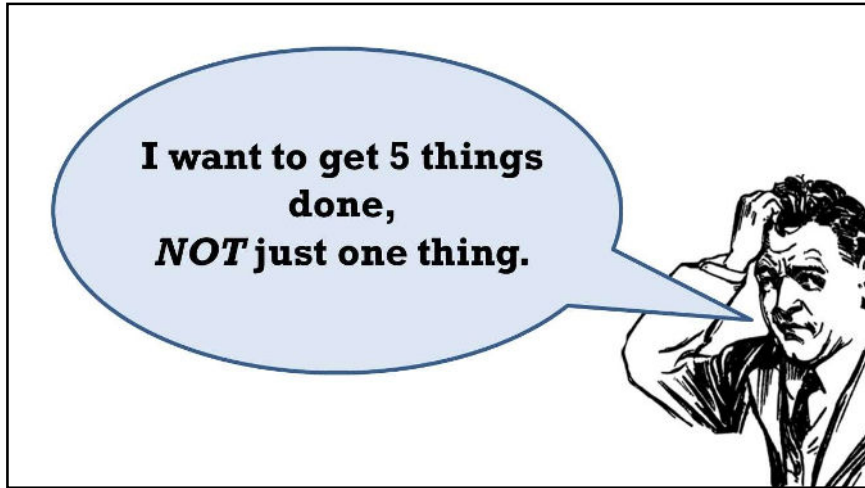
Point of View

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Working Separately

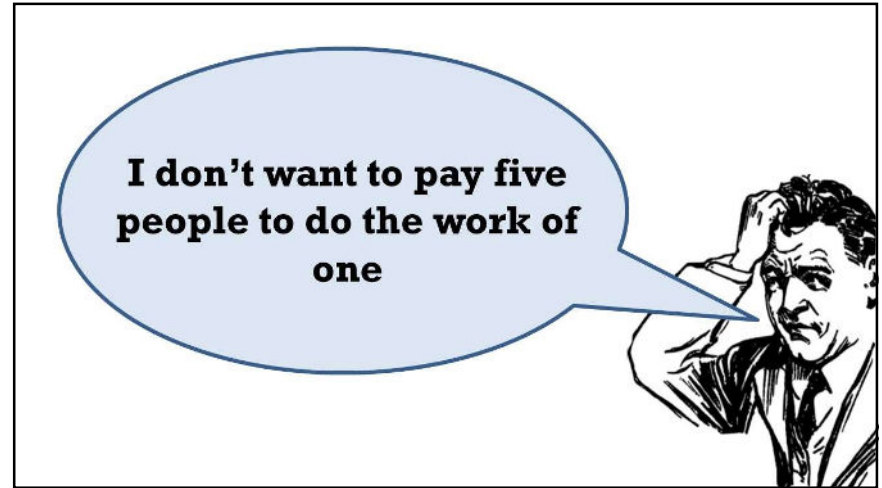


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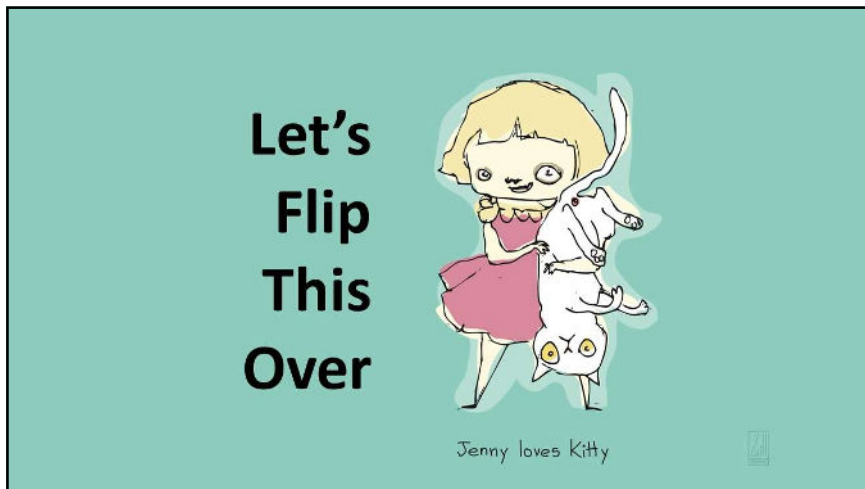
**I want to get 5 things
done,
NOT just one thing.**

41



**I don't want to pay five
people to do the work of
one**

42



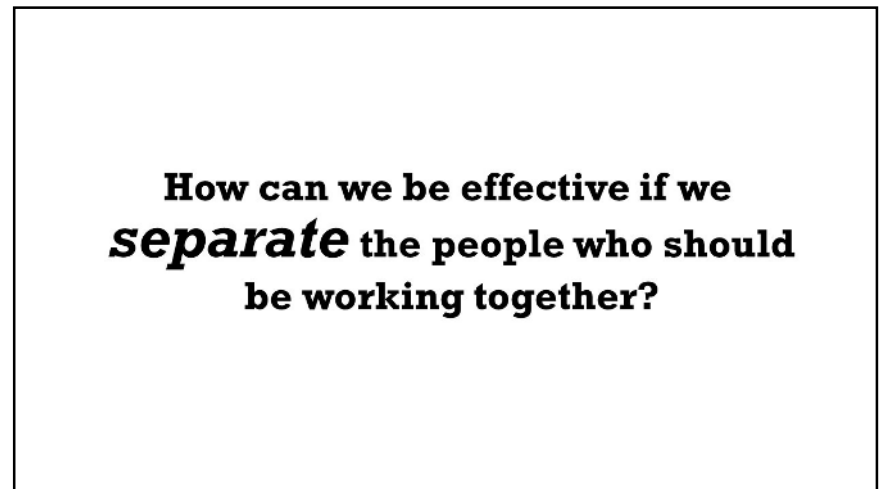
**Let's
Flip
This
Over**



Jenny loves Kitty

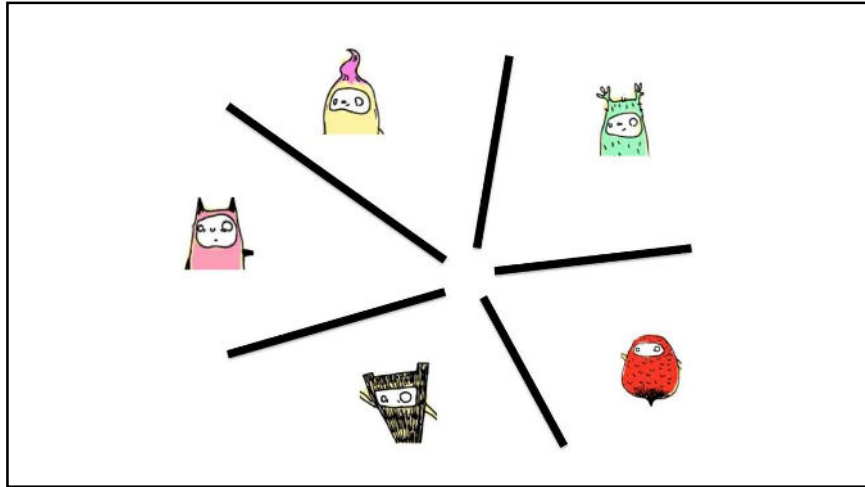


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**How can we be effective if we
separate the people who should
be working together?**

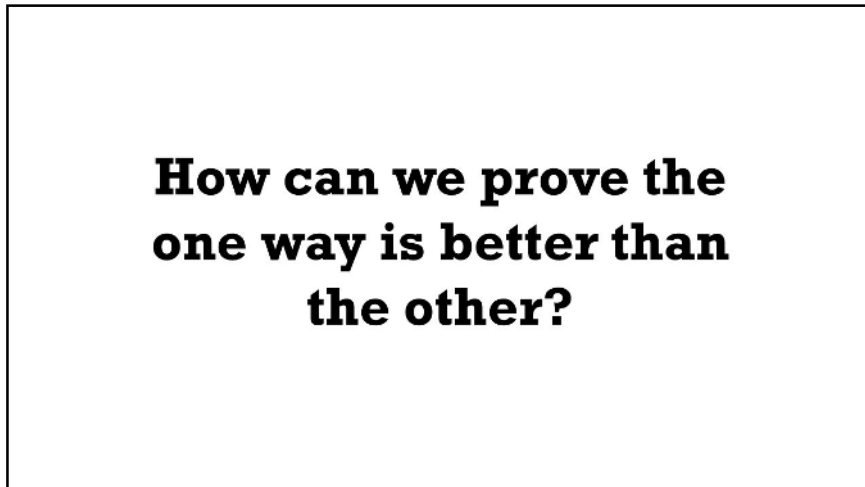
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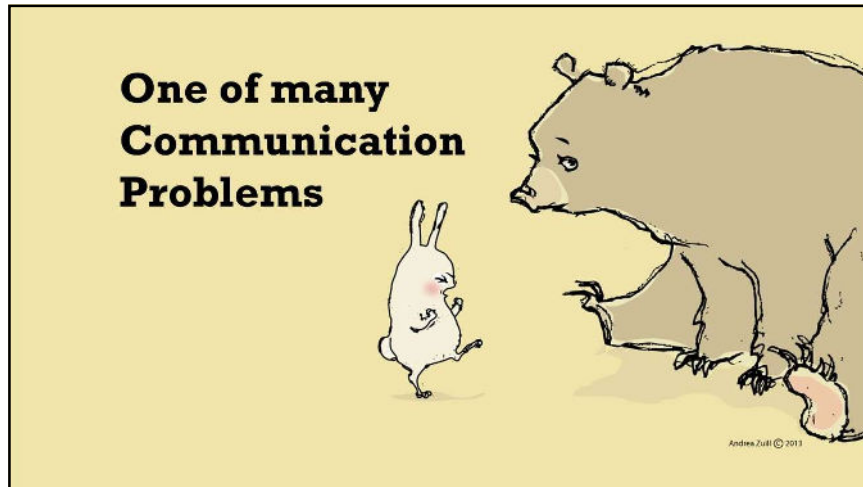
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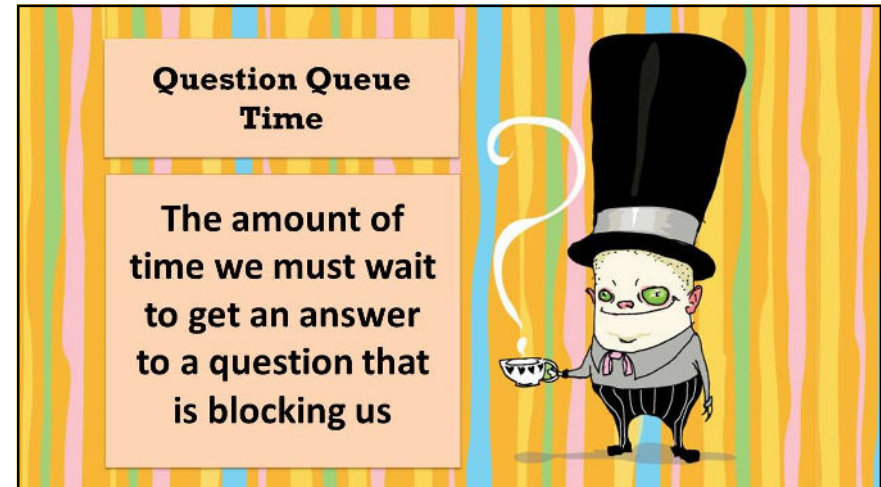
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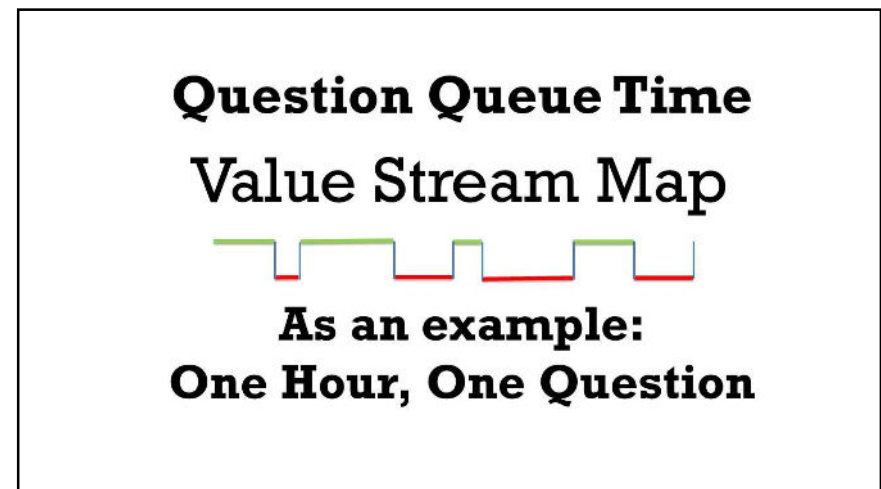
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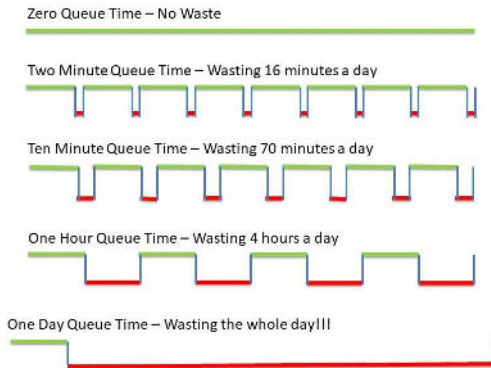


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Question Queue Time during an Eight Hour Day



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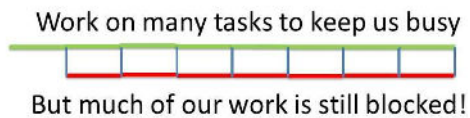
How do we typically solve this?



**Inventory: Work started on, but not yet delivering value.
Inventory IS WASTE!!!**

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How do we typically solve this?



**Symptom?
Problem?**

59

How did we Solve This?



Zero Queue Time

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How did we Solve This?



Zero Queue Time



Two Minute Queue Time



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How did we Solve This?



Zero Queue Time



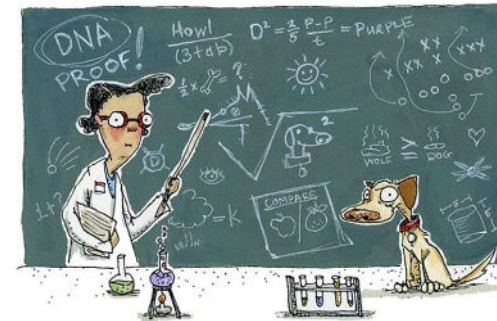
“Automatic” One-Piece Flow

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Flow

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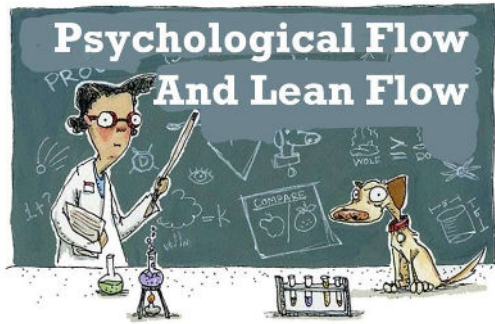
Flow vs. Flow



Andrea Zulll © 2016

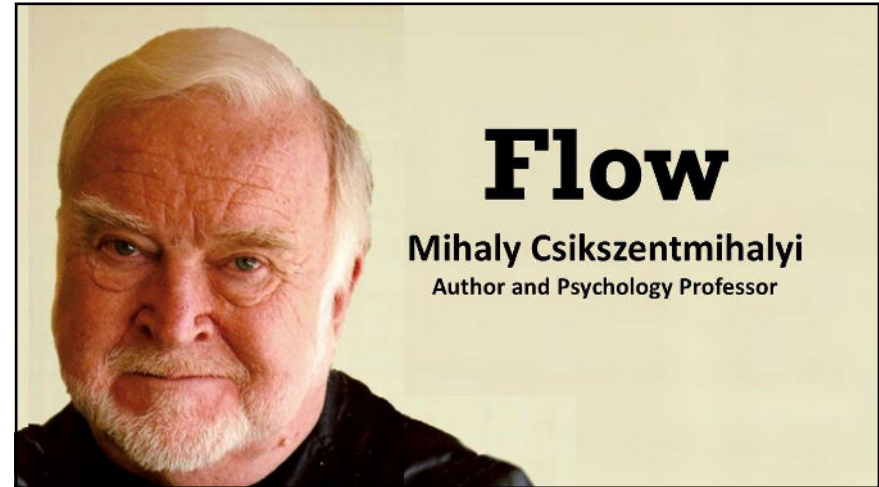
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Flow vs. Flow



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Flow

Mihaly Csikszentmihalyi
Author and Psychology Professor

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Flow

A highly effective mental state of a person completely immersed in an activity.

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Flow

Being "In the Zone"

- Leads to a sense of ecstasy and clarity
 - You know exactly what you want to do from one moment to the other
 - Sense of time disappears.
 - You forget yourself.
 - You feel part of something larger.
- Csikszentmihalyi

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Do we destroy psychological flow when we work as a team?



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We Enable Individual FLOW
by giving each person the safety and space to think in their own way.



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**I wanted
a better
question**



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Is there a “team” psychological Flow, and what is that like?



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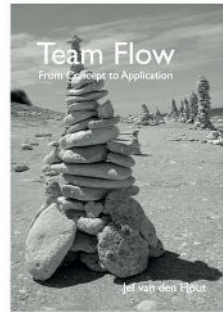
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Team Flow

Collective ambition
 Common goal
 Aligned personal goals
 High skill integration
 Open communication
 Safety
 Mutual commitment
 Sense of unity
 Sense of joint progress
 Mutual trust
 Holistic focus



Jef van den Hout

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We Enable **Team FLOW** by Working Well Together



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**This is
 ALL GOOD!**



http://www.huffingtonpost.com/entry/looking-for-a-smile-in-your-meals-objects_of_11ae20a1e49035dfc89dec9

79

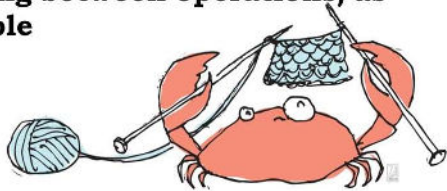
But...
 There is another
 kind of flow.
 Flow, as in Lean



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Flow In Manufacturing [simplified]

- Complete production of one piece
- From start to finish
- With as little inventory (work in process) and as little queueing (waiting between operations) as possible



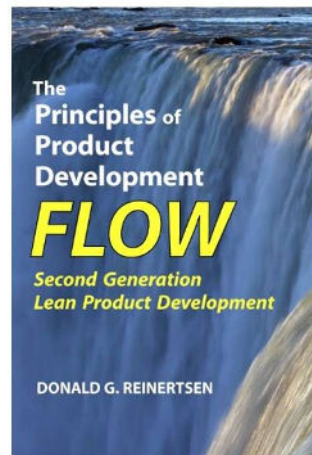
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Can we get Flow with Software Development?



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**It
Appears
we can**



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The Principle of Queueing Waste:

Queues are the root cause of the majority of economic waste in product development

Donald Reinertsen



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Queues create:



Longer cycle time
Increased risk
More Variability
More overhead
Lower quality
Less motivation

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Flow with Software Development:
Each Story flows from “idea”
to delivered, working software
directly
without queueing,
inventory,
distraction,
interruption,
context switching,
or multitasking



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The Small, Inexpensive, Attempt at Value

ONE AT A TIME



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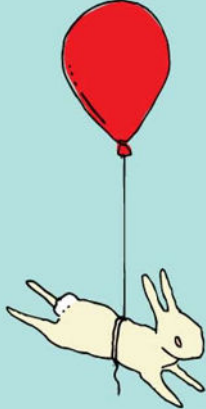
What we found when we Achieved “flow”

Green: The Right Work Getting Done
 (includes exploring, experimenting, discovery)

Red (Waste): The Wrong Things faded away

Examples: Queuing and Waiting, Inventory, Merging, Arguing, Discussing rather than trying things, Work that doesn't need to be done, Doing the “Wrong Thing”, Failure Demand, meetings, coordination, prioritizing... ad nauseam

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When working as
a team, we
achieved
Lean FLOW
and were
Eliminating
Queues and
[excess] inventory

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**With Software Teaming
what do we want to
optimize for???**



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**We optimize for the
flow of the work**

rather
than for the
output of the
individual



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**We are NOT trying to
Get the most work out of each person**




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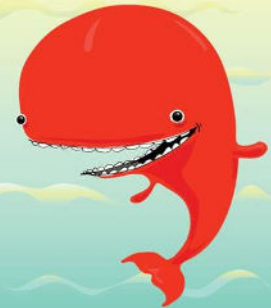
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We seek to get the best
of each of us into
everything we do.



93

I believe I can
now answer that
original question



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How can we be **EFFECTIVE**
with 5 people at one computer?

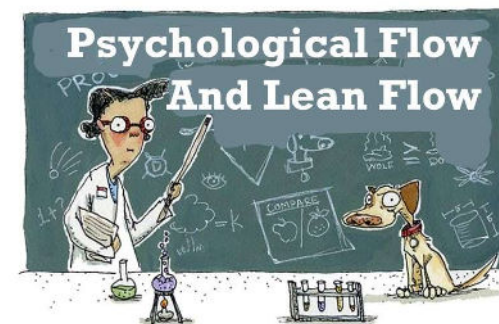


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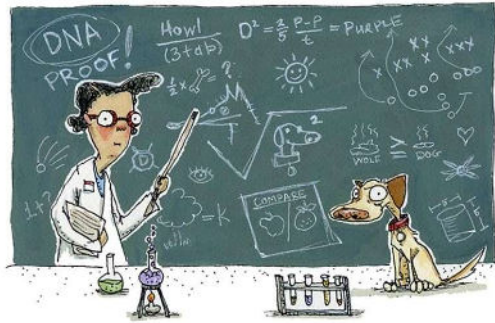
Rather than Flow vs. Flow



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Flow Plus Flow



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Individual Psychological Flow

**Plus
Team Psychological Flow**

**Plus
Lean Flow**

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Flow++

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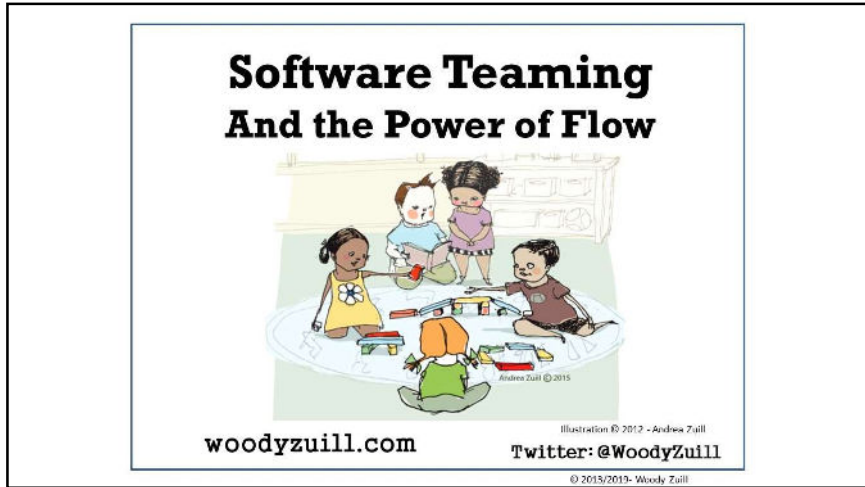
**The object isn't to make art,
it's to be in that wonderful state which
makes art inevitable**

Robert Henri

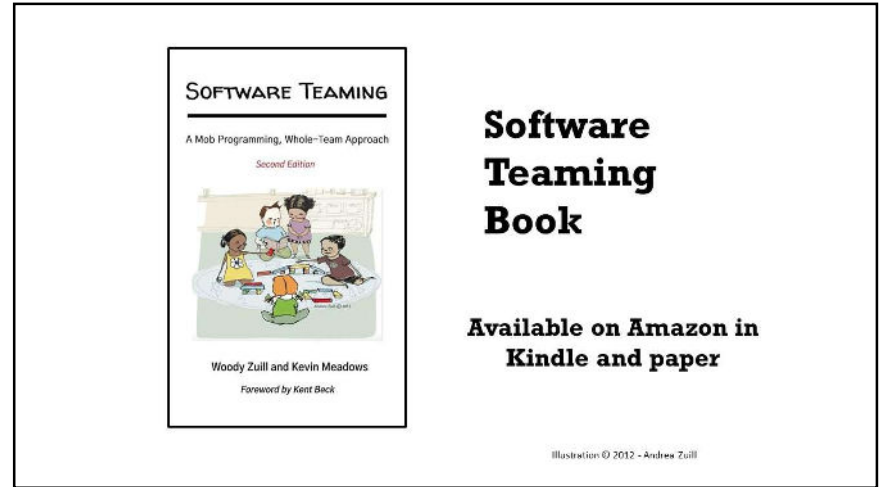


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Thanks so much!



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Muito Obrigado!



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