Kicking the complexity habit

Dan North
@tastapod

Kicking the complexity habit

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Kicking complexity

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Complexity

Dan North
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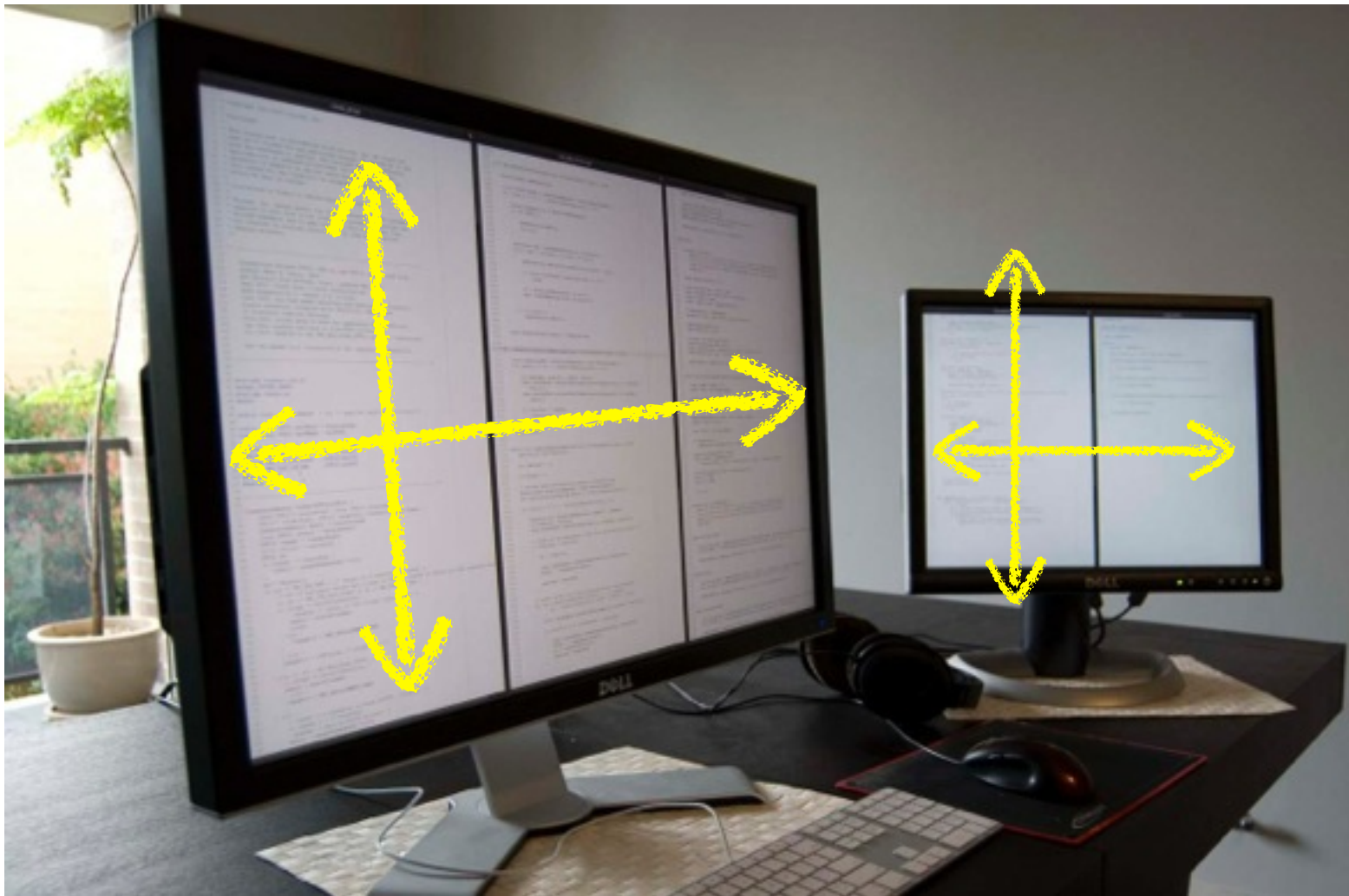
"It really shouldn't be this difficult"

Know your enemy
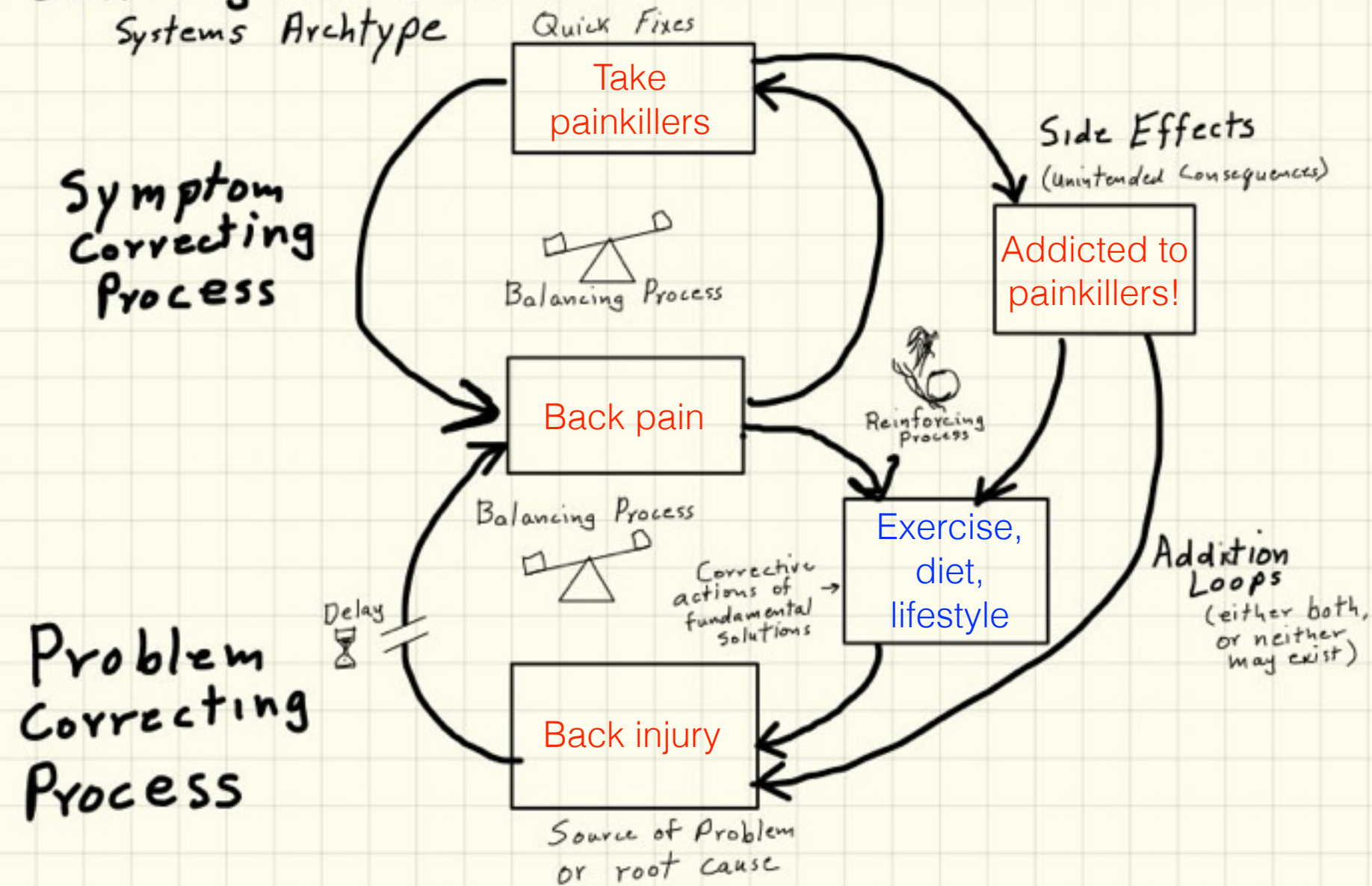
Identifying complexity

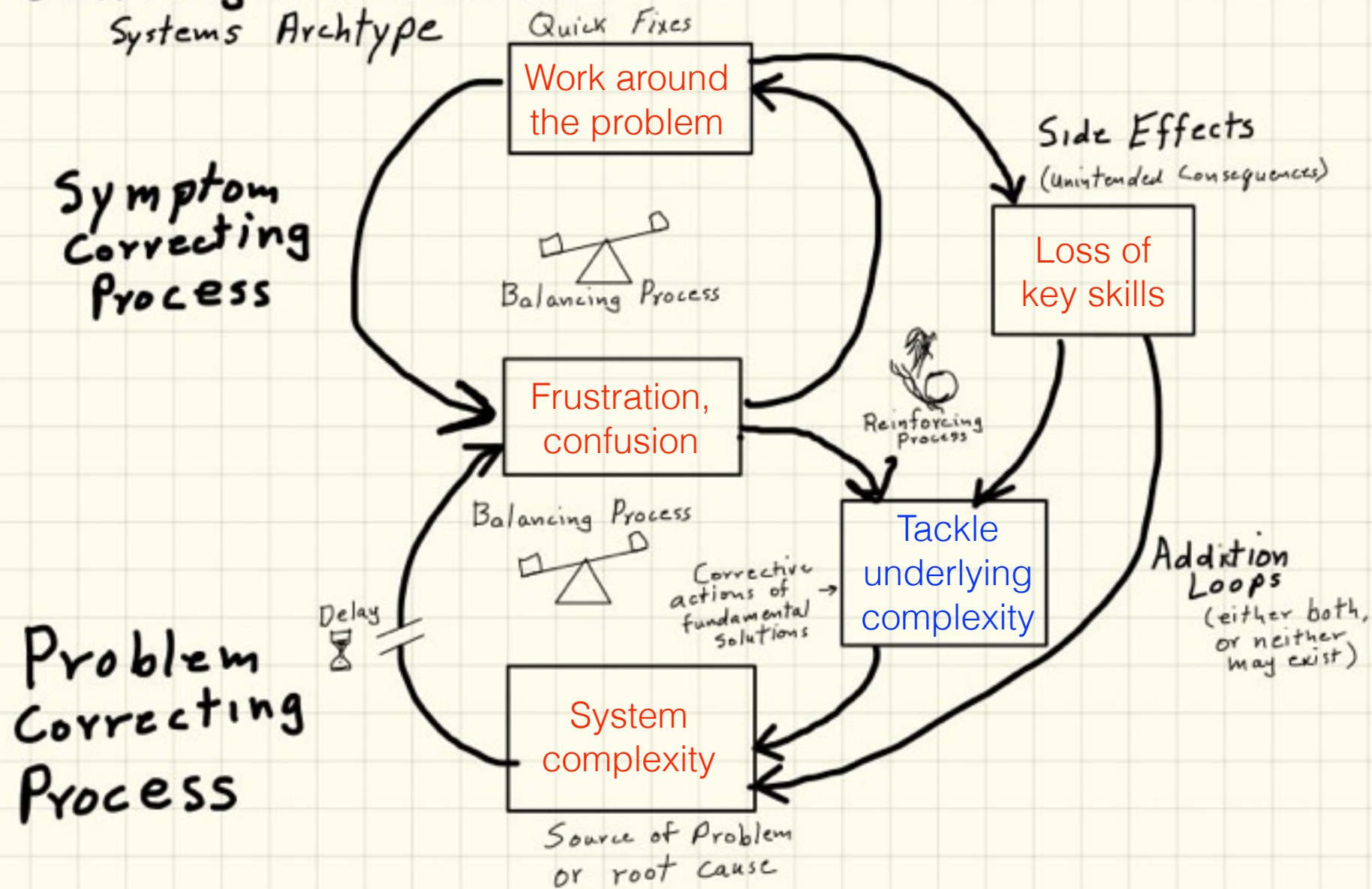Reducing complexity

Avoiding complexity

Identifying complexity

We do what we know

"Shifting The Burden"
Systems Archtype

Quick Fixes

Take painkillers

Symptom Correcting Process

Balancing Process

Side Effects (unintended Consequences)

Addicted to painkillers!

Back pain

Reinforcing Process

Balancing Process

Exercise, diet, lifestyle

Corrective actions of fundamental Solutions

Problem Correcting Process

Delay

Back injury

Addiction Loops (either both, or neither may exist)

Source of Problem or root Cause

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We do what we know

http://www.freemarketcenter.com/systems/causal_loops/

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Painkillers are everywhere!

Architecture
Enterprise mandates

Techniques
TDD

Design
Undirected local choices

Process
too much, too little

Tools
IDEs

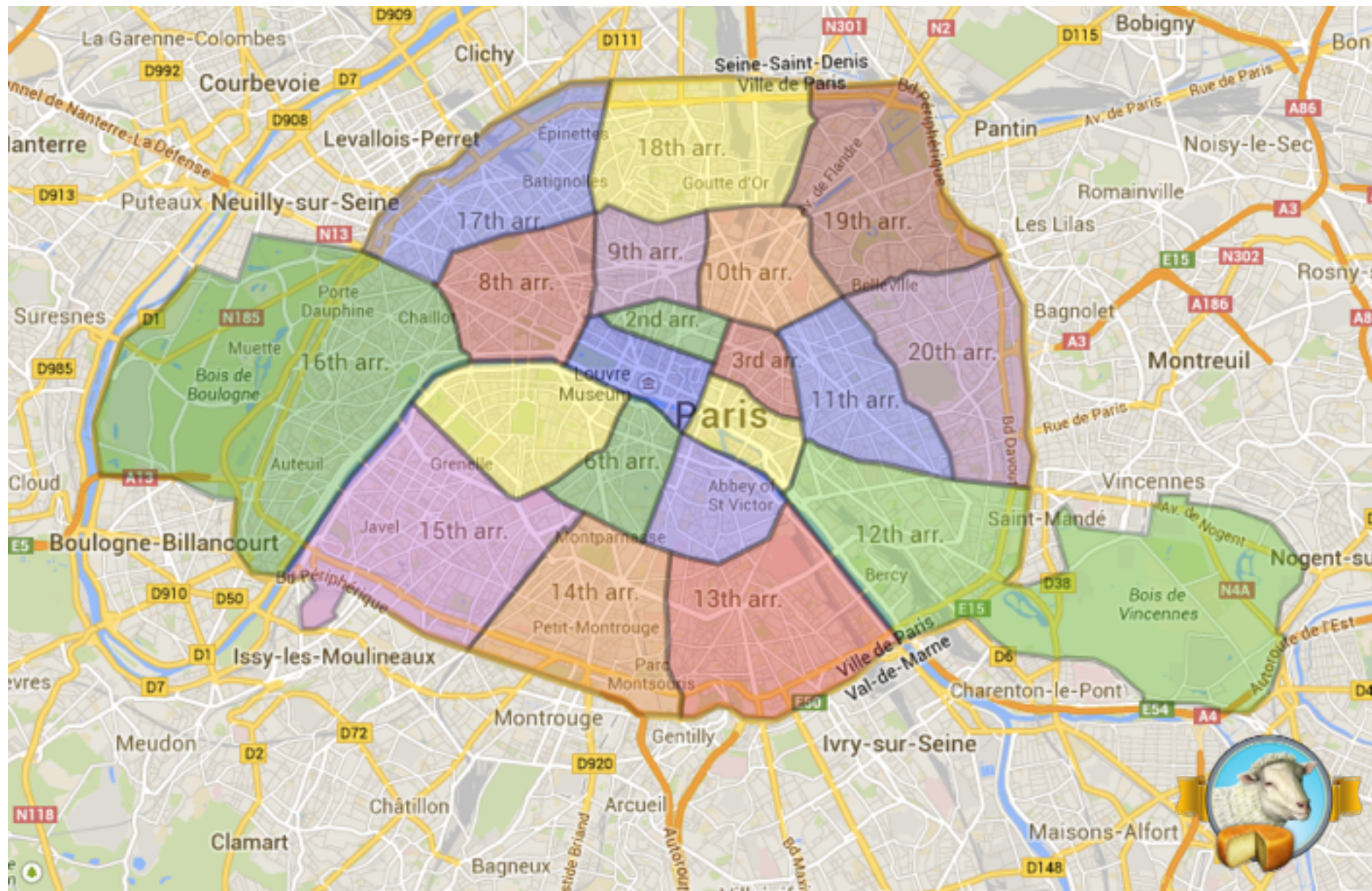Build automation

Organisation
Conway's Law

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Reducing complexity

✓ Monitor your cognitive load

✓ See what's really there - and question it

✓ Use consistent idioms and principles

- Principles + Context = Practices

- Difference is data

✓ Familiarity is not the same as Simplicity

- Use fresh eyes. "What's the dumbest thing..?"

A tale of two cities…

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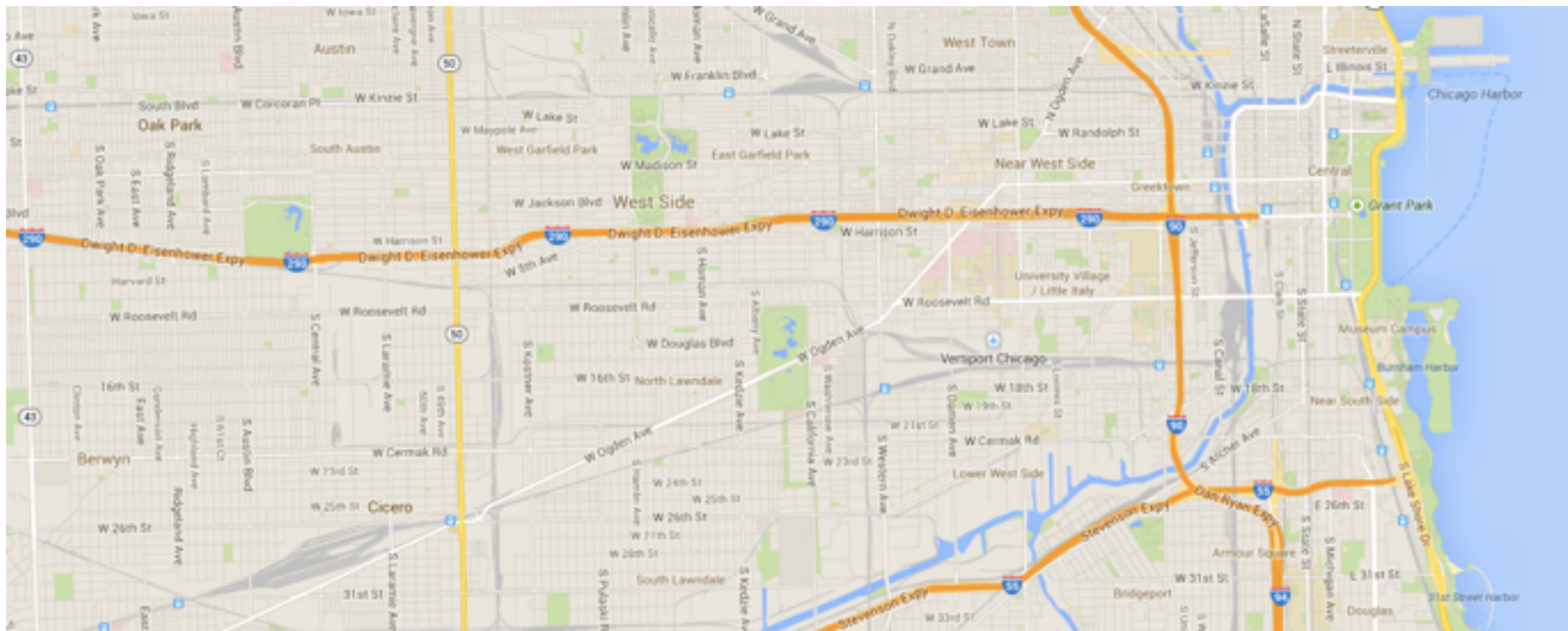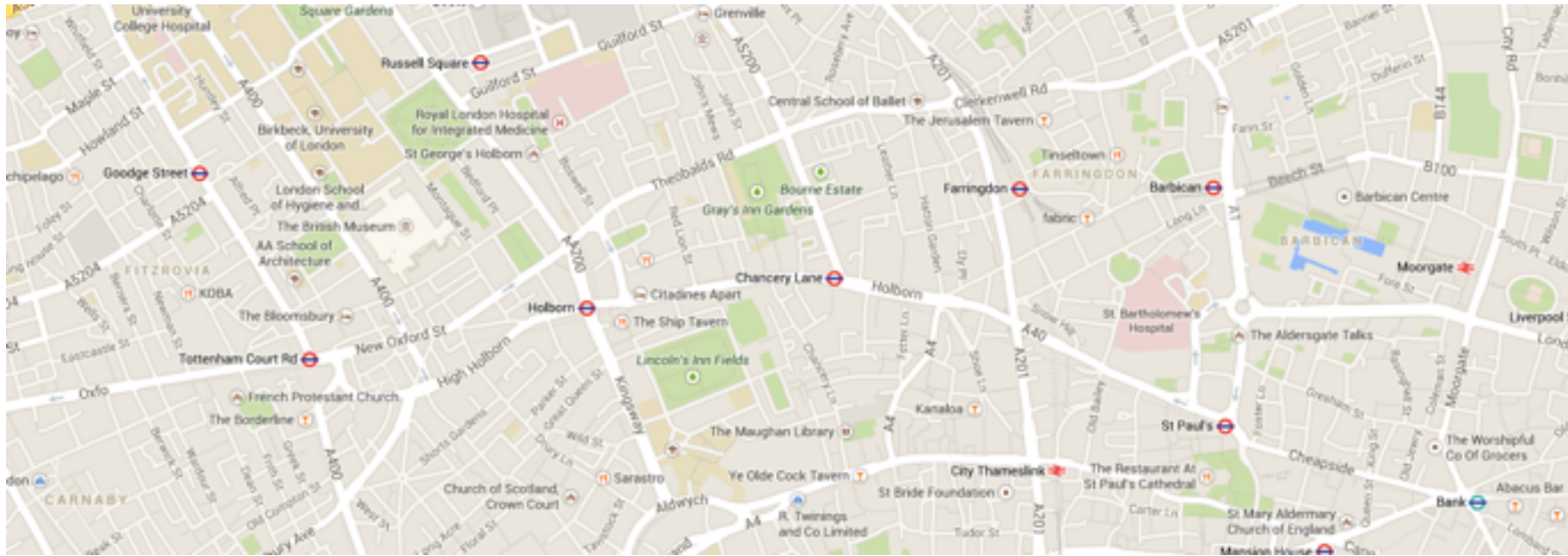
The real other city

Avoiding complexity

✓ Complexity is the default state

- There isn't a "physics", just local decisions

- It grows one day at a time

✓ Consistency at scale is a daily choice

- Agree idioms and guiding principles

✓ Strive for simplicity

- Choose tools and techniques that make it easier

Summing up

Complexity is the default condition

Simplifying is always an option

Consistency is the key

It really shouldn't be this difficult

Thanks for listening

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