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Accelerating collaboration to architect continuous innovation

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Abstract

- The fundamental need to **architect**, **design**, **deploy** and **monitor** applications has not really changed. But, what has changed is the **speed** at which it is done and the ability to be **lock, step and ahead of the change** that is happening in the digital world through innovative technologies. **Open collaboration** and **purposeful innovation** is no longer a choice but something that must be an **integral** part of all phases. This session outlines specific steps that can be taken **across the life cycle** to architect an **ecosystem** that fuels the art of **continuous innovation**.

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MACC Technical Innovation Track

How do you **architect**, **design**, **deploy**, and **monitor** new applications in a way that deliver high performing applications but also support the high rate of change required to move from development to production producing business value?

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It's all about the App!
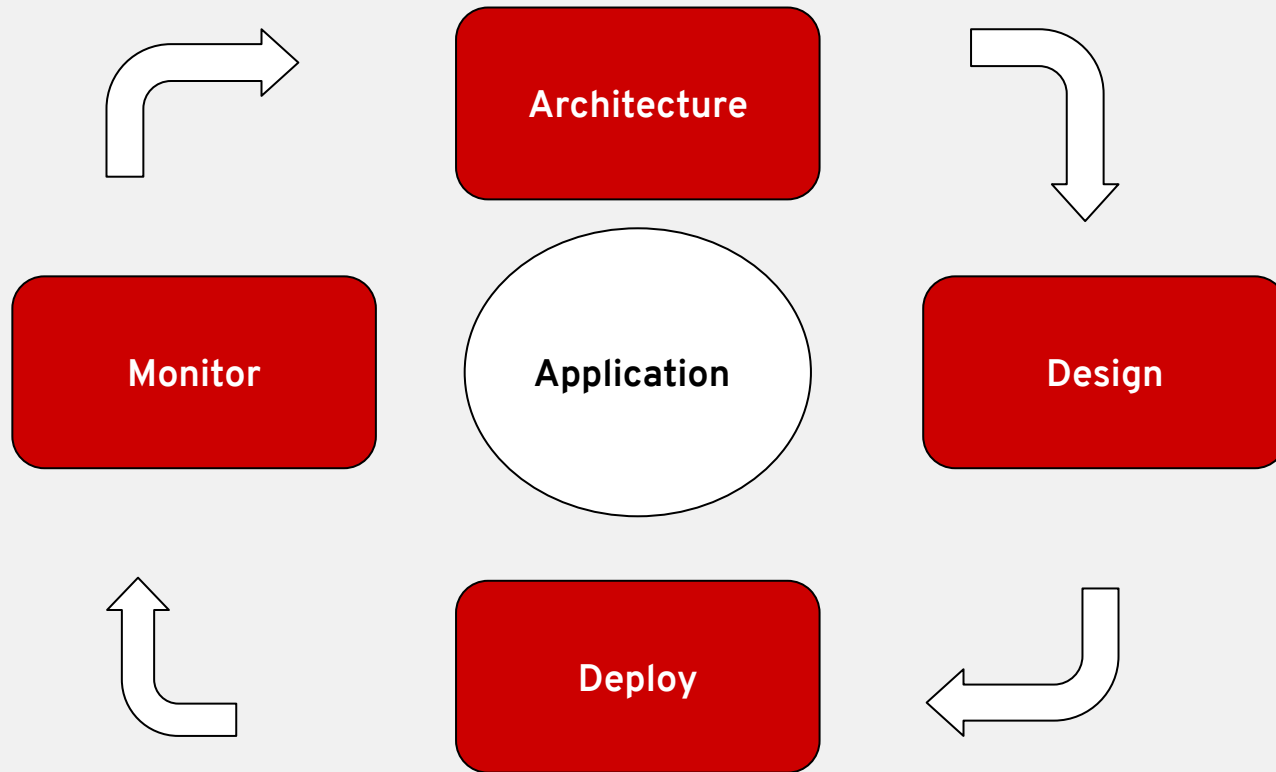
Architecture

Design

Application

Deploy

Monitor

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4 simple tenets to deal with the changing App

- Collaborate to **architect**

- Ideate to **design**

- Automate to **deploy**

- Prescribe to **monitor**

Augmented Ecosystem of Innovation

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We built this city on Culture and Innovation Booth #809

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Through continuous collaboration
Booth #809

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Collaboration is at the heart of the TOGAF standard

© The Open Group

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Every company can have a startup mindset
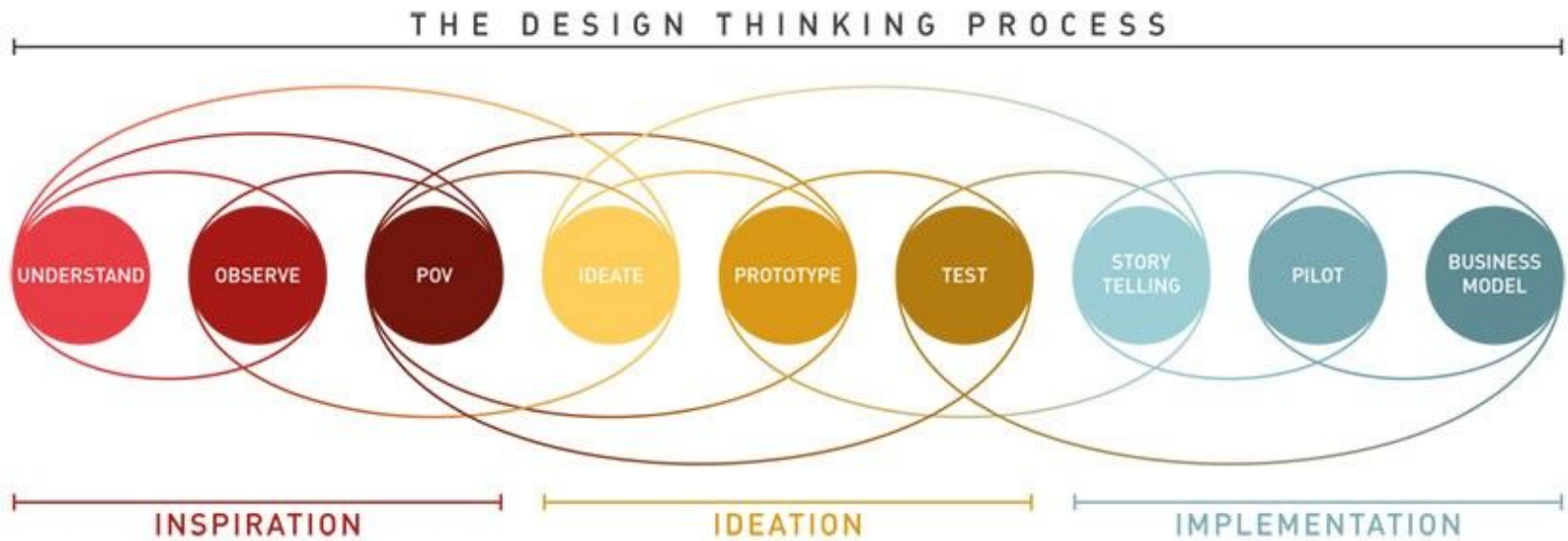

Smarter With **Gartner.**

Why Big Companies Need Lean Startup Techniques
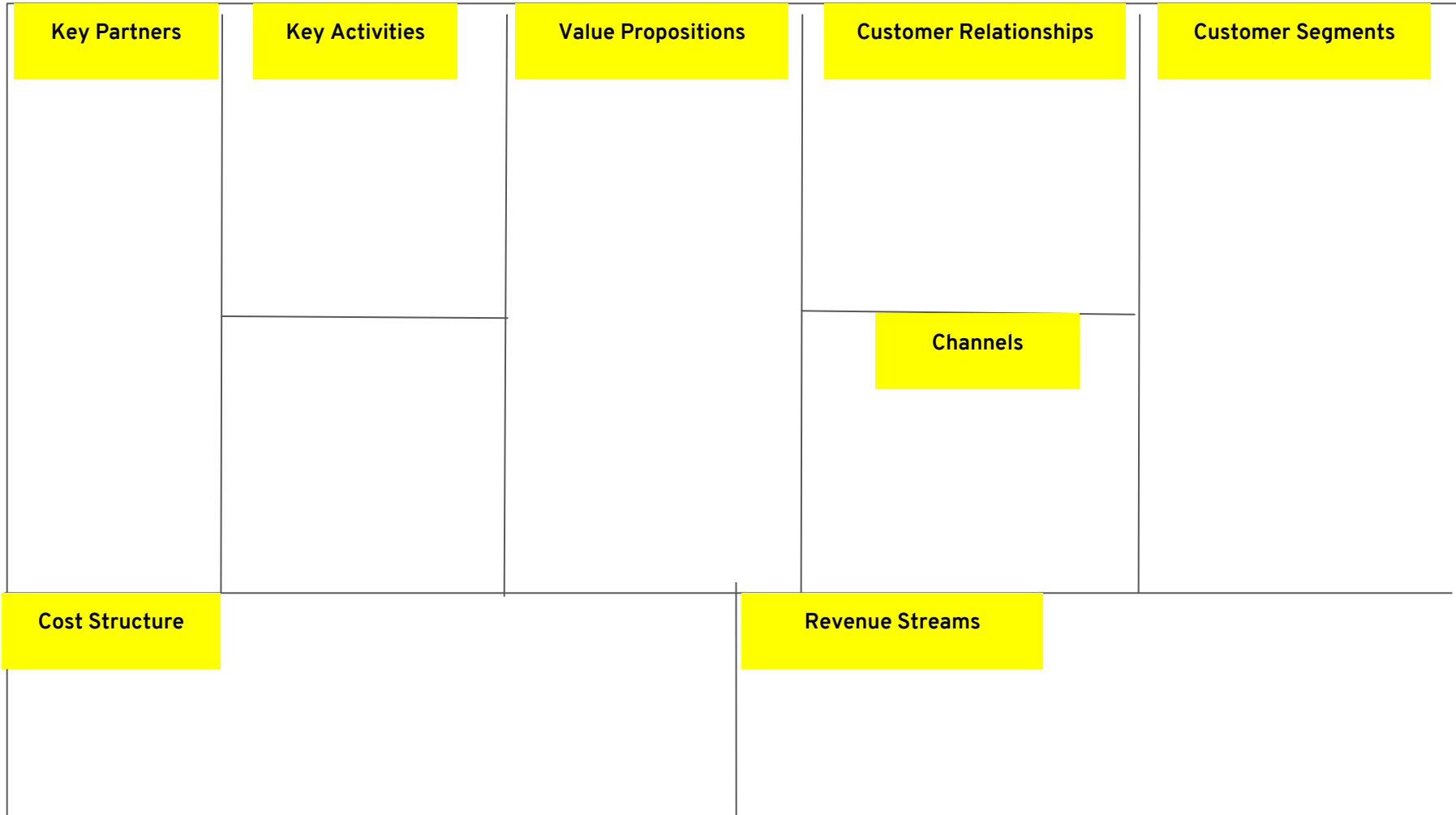
September 28, 2016
Contributor: Kasey Panetta

DIGITAL BUSINESS

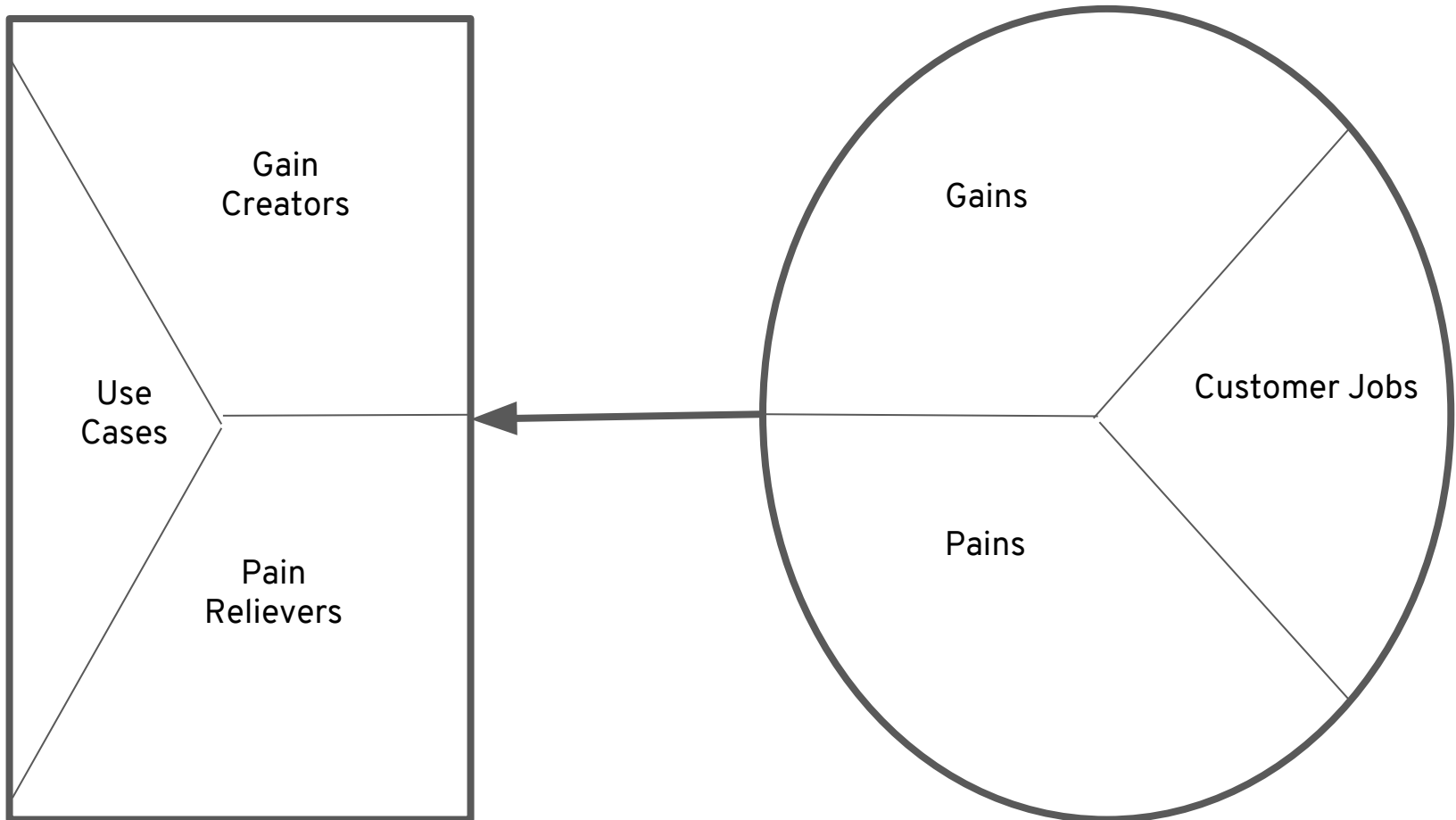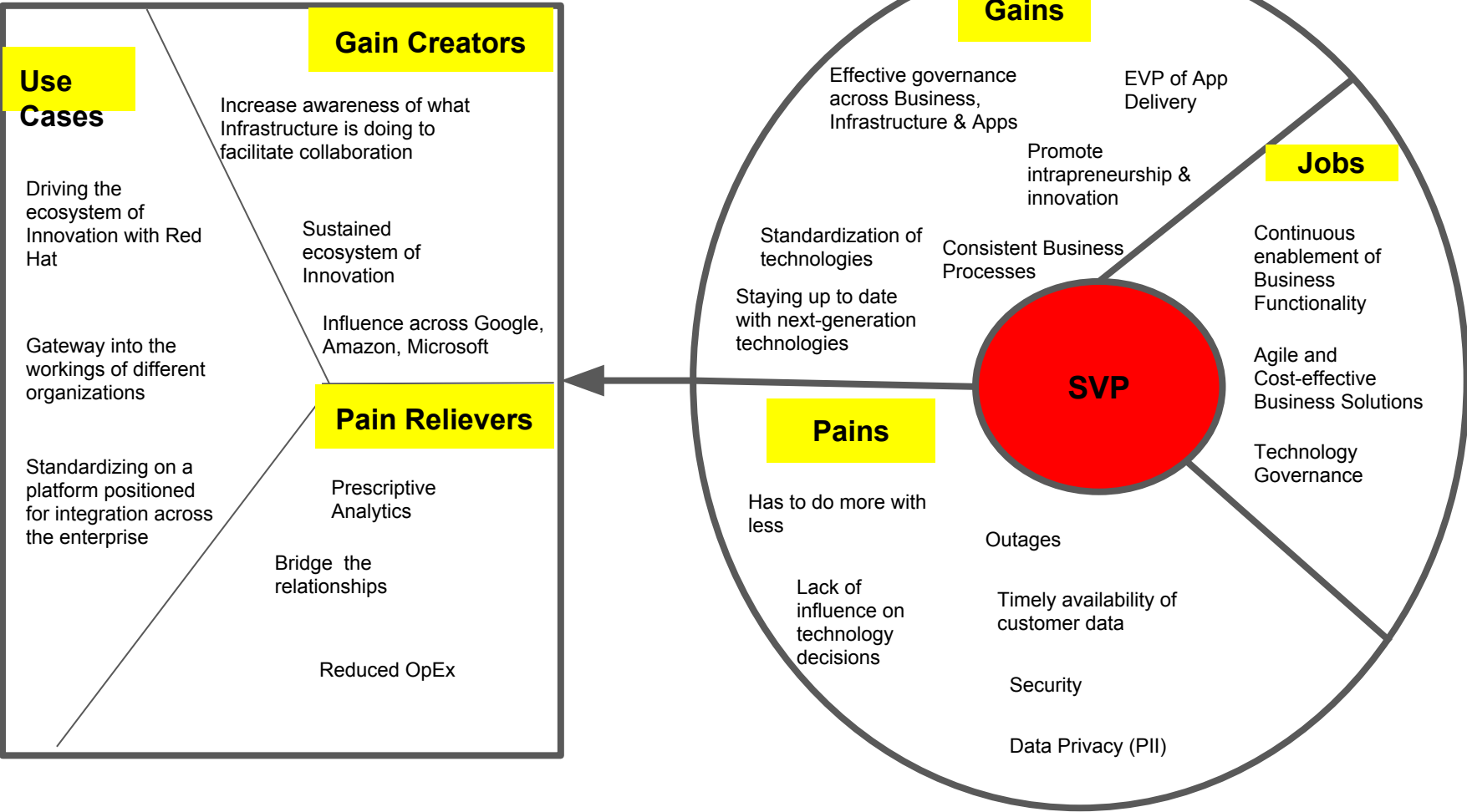Traditional companies need to look to startups to compete in the digital world.

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Design Thinking

THE DESIGN THINKING PROCESS

UNDERSTAND • OBSERVE • POV • IDEATE • PROTOTYPE • TEST • STORY TELLING • PILOT • BUSINESS MODEL

INSPIRATION • IDEATION • IMPLEMENTATION

Design Thinking :: Business Model Canvas

Key Partners	Key Activities	Value Propositions	Customer Relationships	Customer Segments

Channels

Cost Structure	Revenue Streams

Value Proposition Canvas -- for the Customer

Gain
Creators

Use
Cases

Pain
Relievers

Gains

Customer Jobs

Pains

SVP, Enterprise Architecture

Use Cases

Driving the ecosystem of Innovation with Red Hat

Gateway into the workings of different organizations

Standardizing on a platform positioned for integration across the enterprise

Gain Creators

Increase awareness of what Infrastructure is doing to facilitate collaboration

Sustained ecosystem of Innovation

Influence across Google, Amazon, Microsoft

Pain Relievers

Prescriptive Analytics

Bridge the relationships

Reduced OpEx

Gains

Effective governance across Business, Infrastructure & Apps

EVP of App Delivery

Promote intrapreneurship & innovation

Standardization of technologies

Consistent Business Processes

Staying up to date with next-generation technologies

Jobs

Continuous enablement of Business Functionality

Agile and Cost-effective Business Solutions

Technology Governance

SVP

Pains

Has to do more with less

Outages

Lack of influence on technology decisions

Timely availability of customer data

Security

Data Privacy (PII)

Innovating Collaboration

The **Marble Track Hack attack** is all about a simple marble that must successfully travel the track from start to finish in no more than 1m 30 sec. The marble must cross:

- At least four towers, 2.5 feet high
- At least six drops from one track to another
- Start at cup on the top of a tower
- End in the cup on the table
- At least 1 elevator per tower
- And yes, it's OK to re-build anything!!

[The Magic of Open Source Innovation through Collaboration](#)
Red Hat Blog by E.G.Nadhan

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Superminds

Superminds

By

Thomas W. Malone

A fascinating look at the remarkable capacity for intelligence exhibited by groups of people and computers working together.
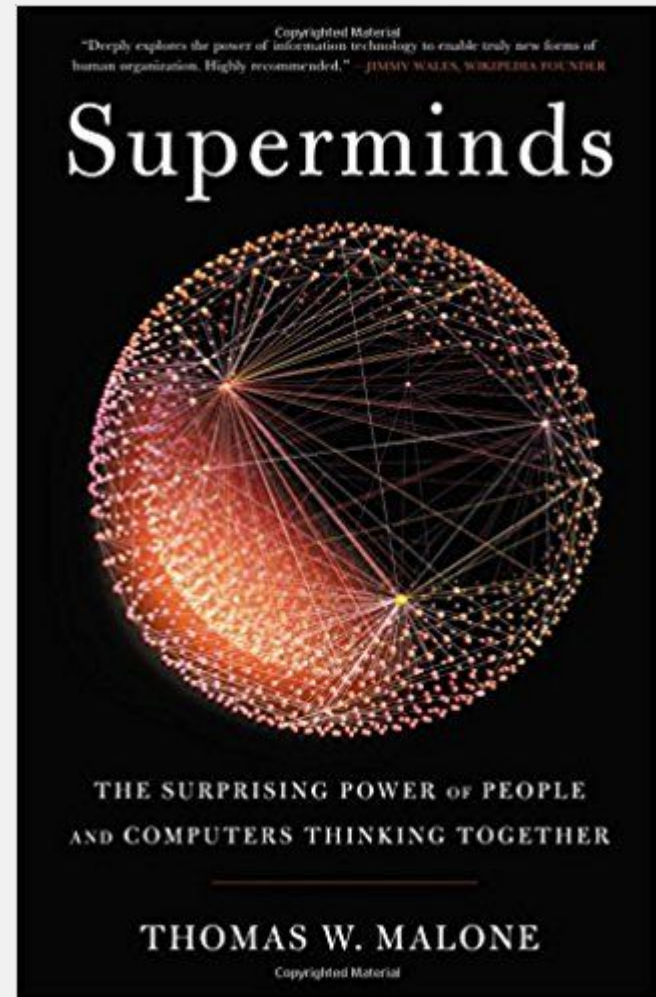
How **do we augment Collective Intelligence?**
From Superminds by Thomas W. Mallone

Intelligence

Collective Intelligence

Human
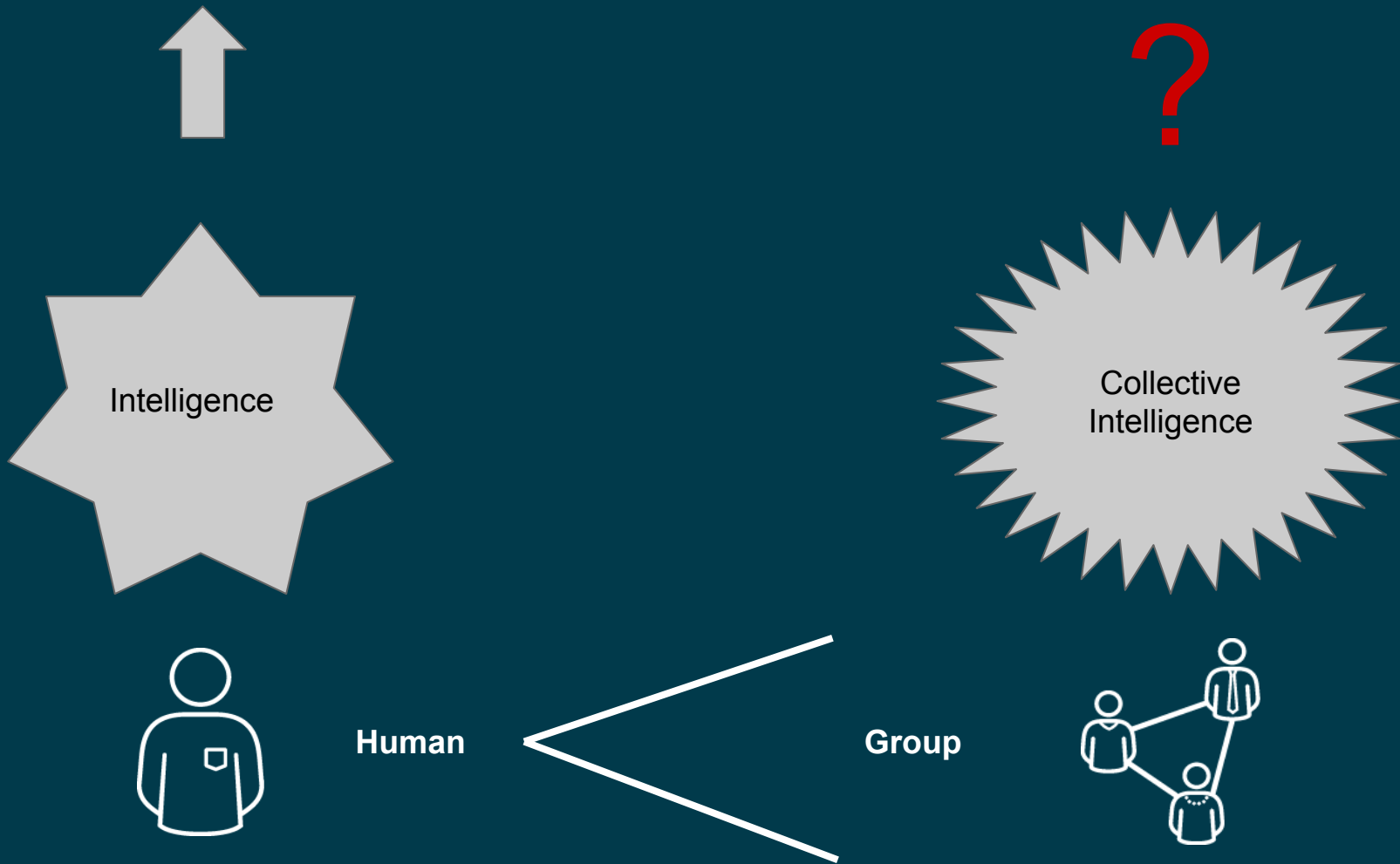
Group

Techniques for improving collective intelligence

- Average social perceptiveness of the members

    - Reading the Mind in the Eyes test

- Degree to which group members participated equally in the conversation

- **Proportion of women in the group**

From Superminds by Thomas W. Mallone

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The Industrial Revolution of Manufacturing
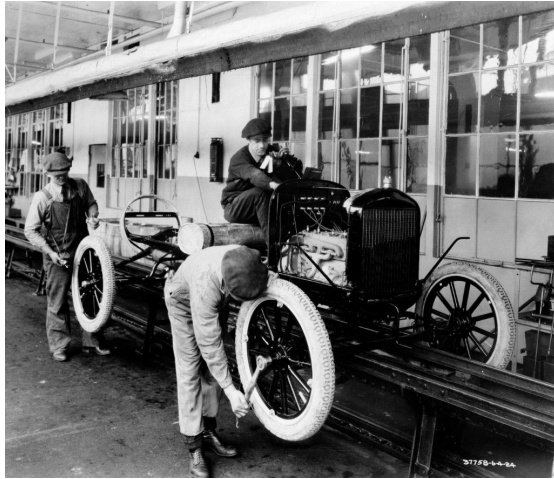
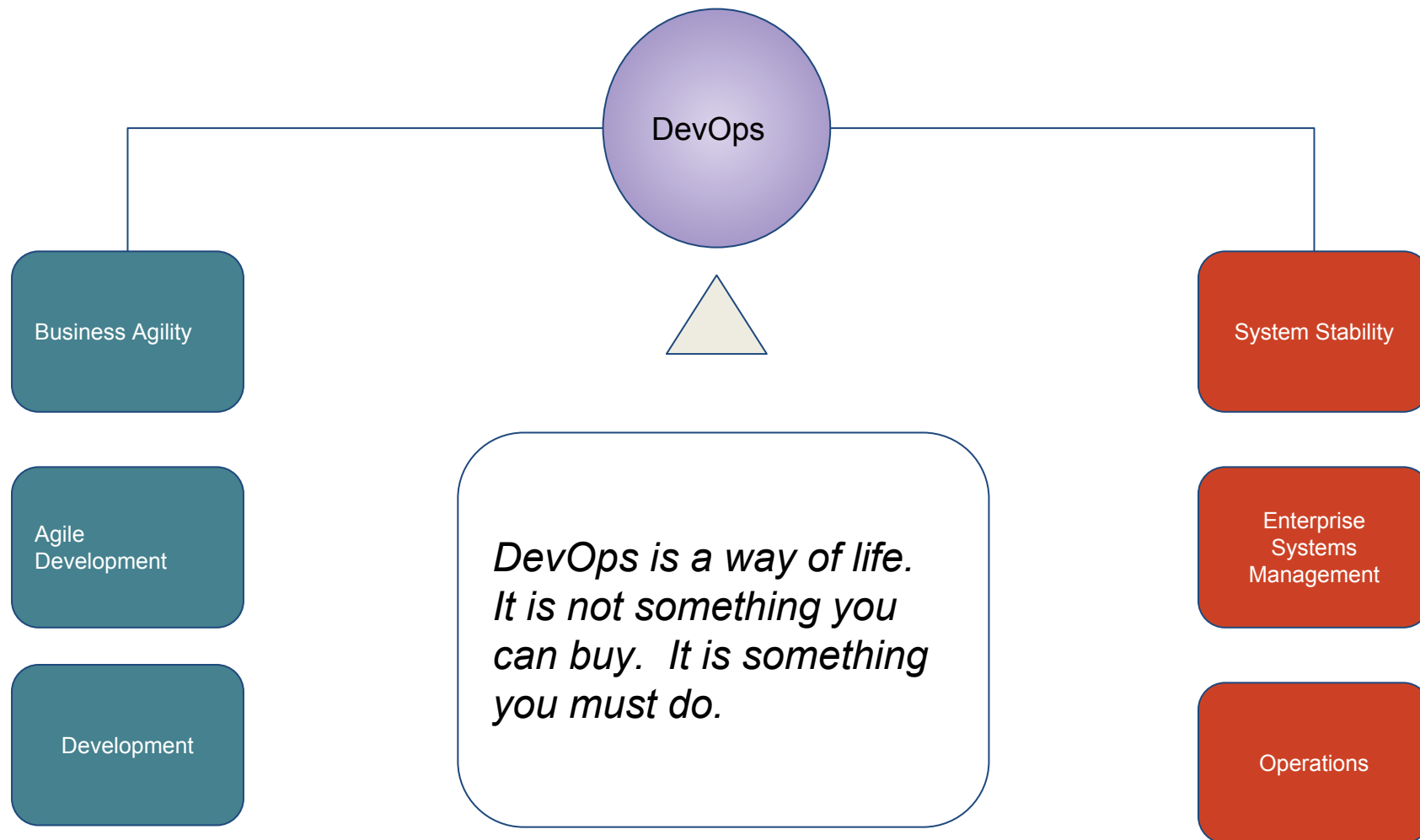Standardization

Continuous Delivery

Automation

But where was Enterprise IT?

Application Version X

Discover
Business Requirements

Design
Technical Design

Develop
Coding & Testing

Test
Client OK & Launch

Waterfall Method

DEVELOPMENT

OPERATIONS

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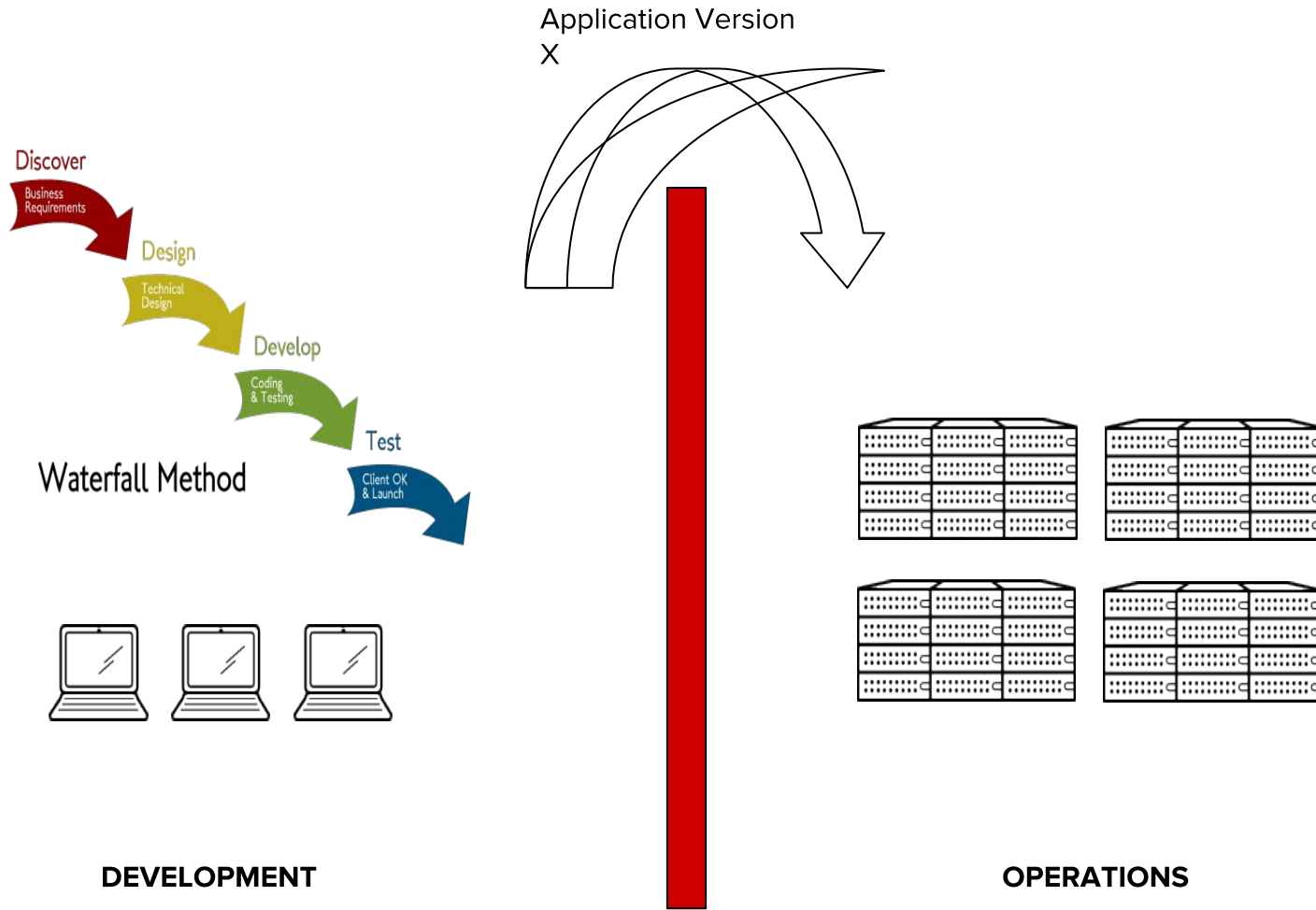
DevOps is about striking a balance

DevOps is about striking a balance

DevOps

Business Agility

Agile Development

Development

System Stability

Enterprise Systems Management

Operations

DevOps is a way of life. It is not something you can buy. It is something you must do.
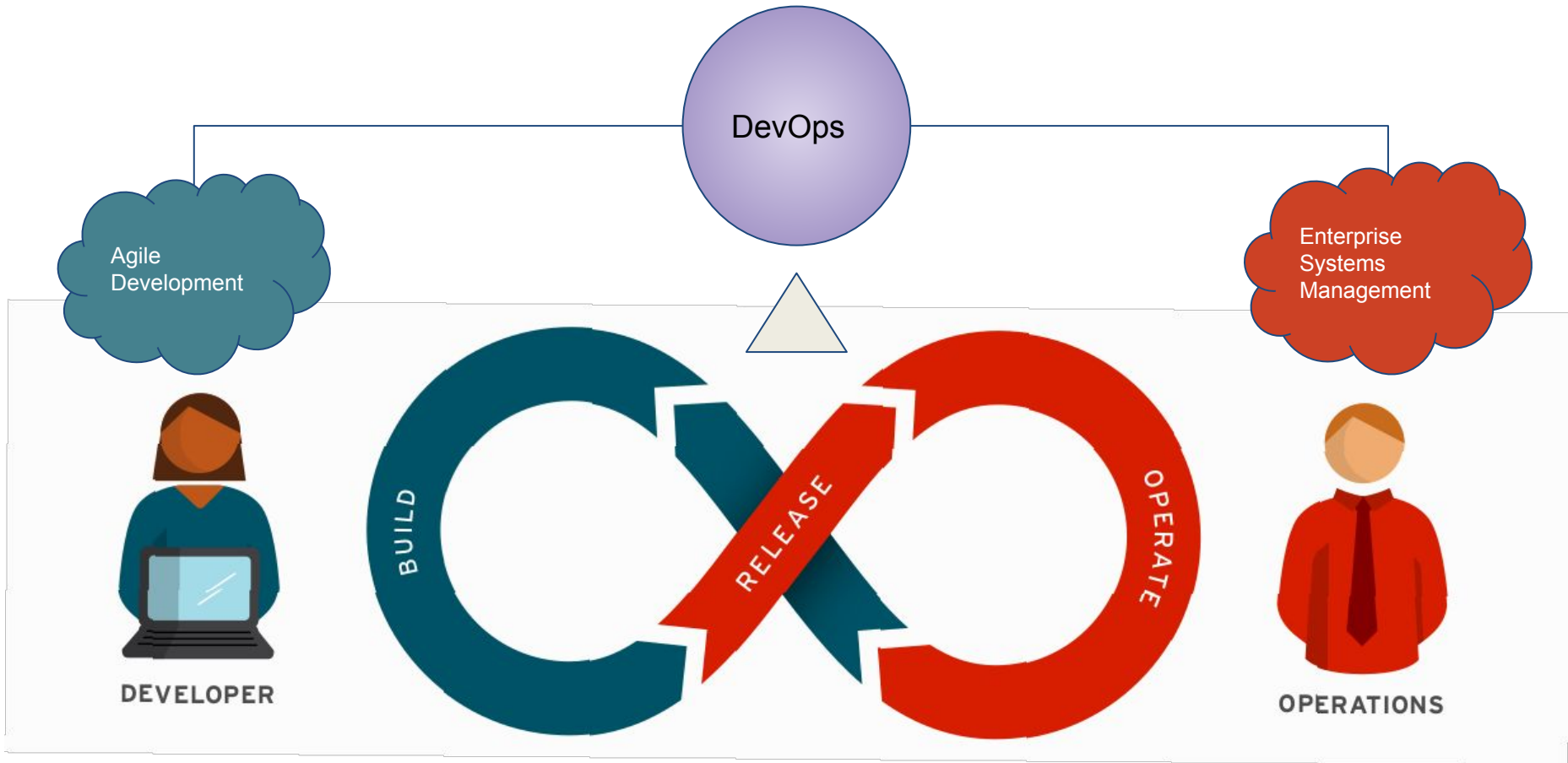
DevOps is defined by

- The **culture** of the enterprise

- The **mindset** of the people

  - The **art** of collaboration

    - The **science** of automation

    - The **discipline** of continuous integration

    - The **passion** for continuous testing

    - The **need** for continuous delivery

    - The **system** of continuous monitoring

      - The **power** of standardized tooling

"You can use as much DevOps as you want"

Tim Yeaton, SVP, Red Hat

Gartner ITXPO 2016

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Continuous deployment needs continuous automation!
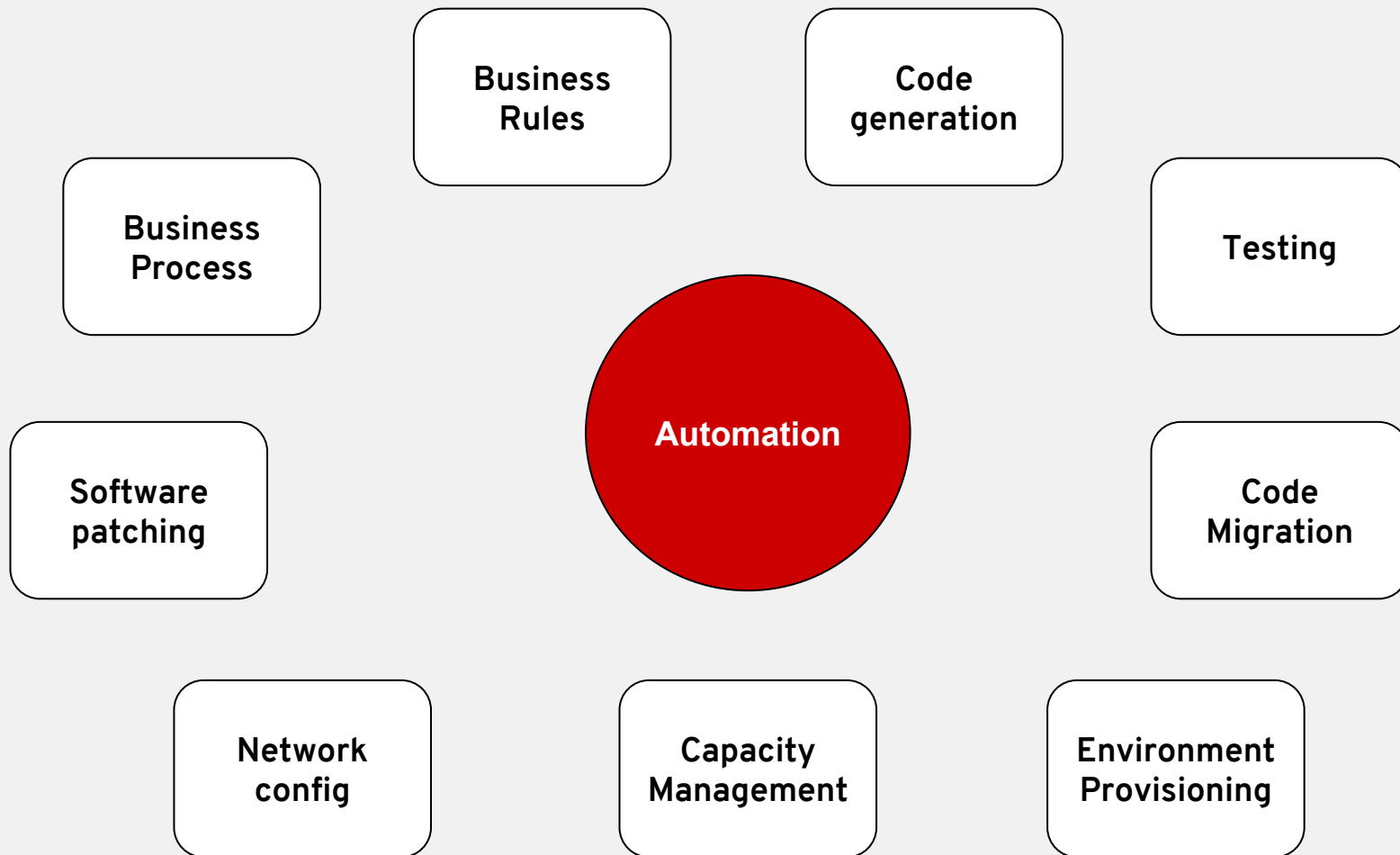
Automation

Business Rules

Code generation

Testing

Business Process

Software patching

Code Migration

Network config

Capacity Management

Environment Provisioning

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Analytics matter -- progressively

Prescriptive Analytics

What is going to happen?

Predictive Analytics

What can we do about it?

What happened?

Diagnostic Analytics

Why did it happen?

Descriptive Analytics
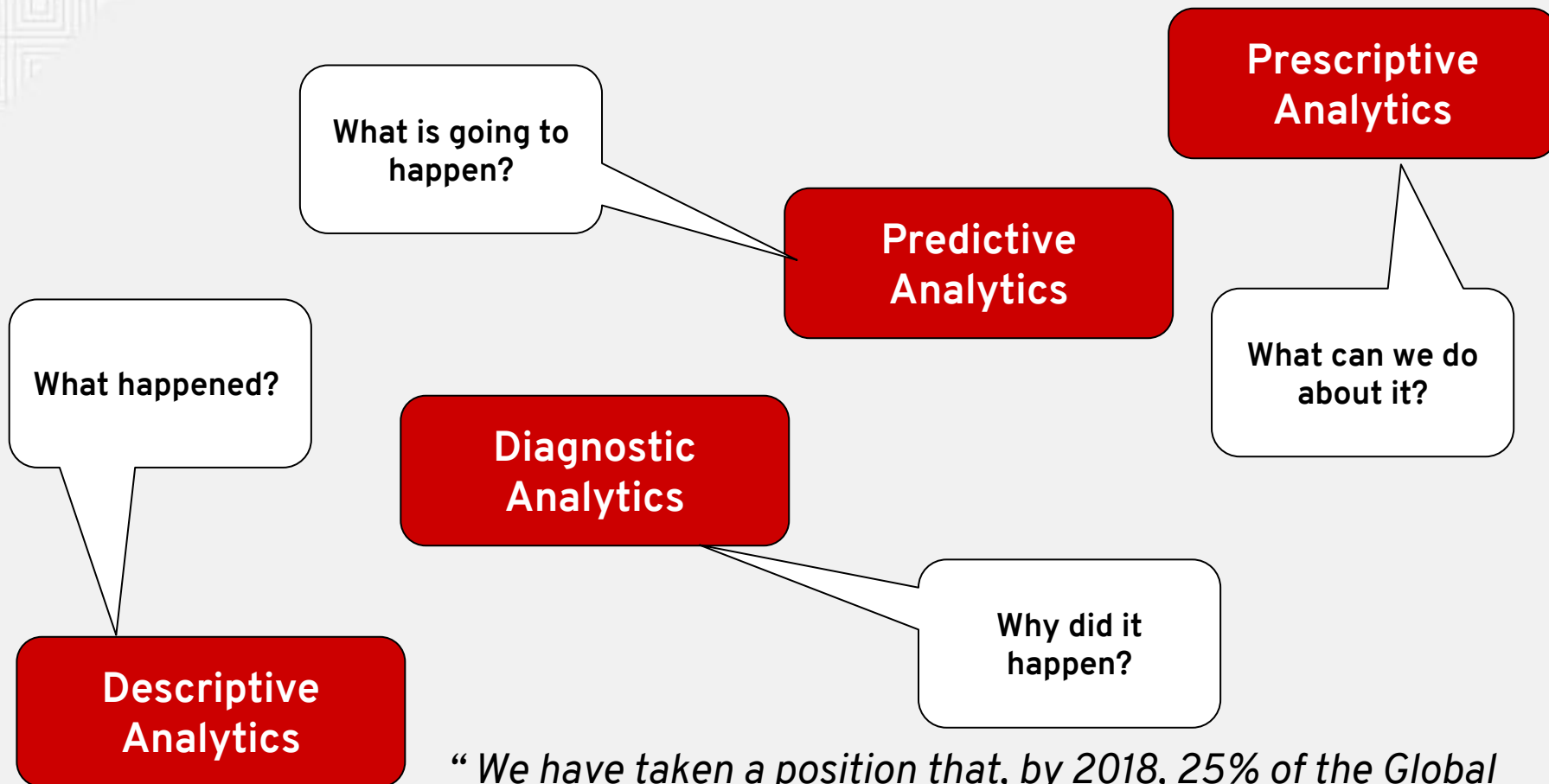
" We have taken a position that, by 2018, 25% of the Global 2000 will have deployed an IT Operations Analytics platform (...) up from about 2% today."

– WILL CAPPELLI, vice president & research analyst , Gartner

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Data to the rescue for Prescriptive Analytics

Discover

Validate

Resolve

Continuous identification of new risks driven by unique industry data

Based on real-world results from millions of enterprise deployments

Automatically tailored recommendations and remediation

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Proactive remediation

Plant an idea in someone's mind. If he succeeds, it will be the perfect crime, but a dangerous enemy anticipates Cobb's every move.

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Augmented Ecosystem of Innovation

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Collective intelligence breeds innovation

Collective intelligence can be augmented with computers

AI
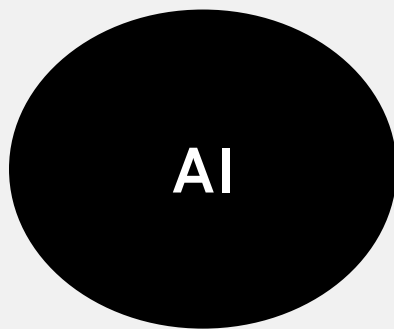
Predicts Faster

Considers More

Processes Mass

Ellen Eichhorn, Gartner Analyst in the demistify AI in Manufacturing session at Gartner ITXPO 2018

Growing collective intelligence scales open innovation

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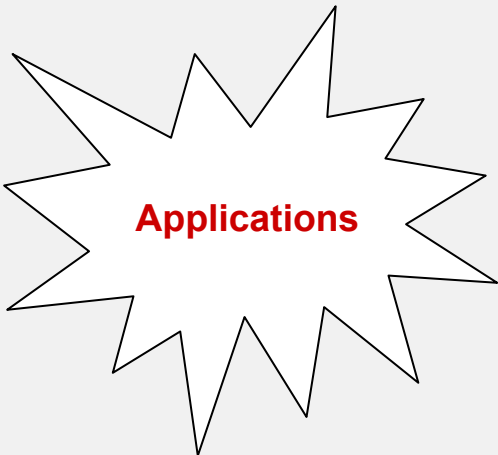# OPEN SOURCE :: It is not just code :: It is CULTURE

Collaboration

Shared problems are solved faster

1,000,000+ PROJECTS

Transparency
(both access and the
ability to act)

Working together
creates
standardization

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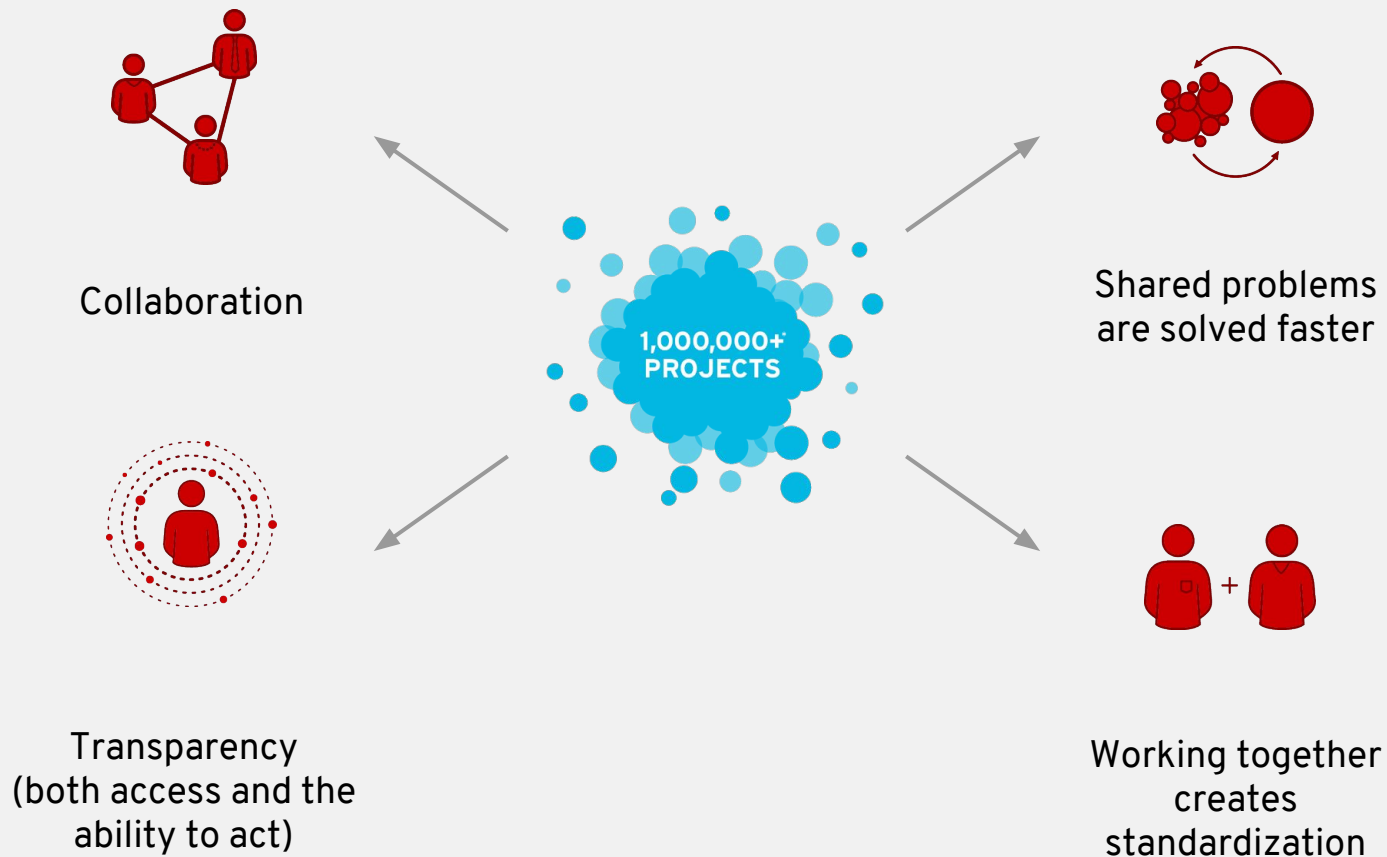
OPEN SOURCE FUELS RAPID INNOVATION

CLOUD

INFRASTRUCTURE AS-A-SERVICE

DATA & ANALYTICS

1,000,000+ PROJECTS

PLATFORM AS-A-SERVICE

MOBILE

MANAGEMENT & AUTOMATION
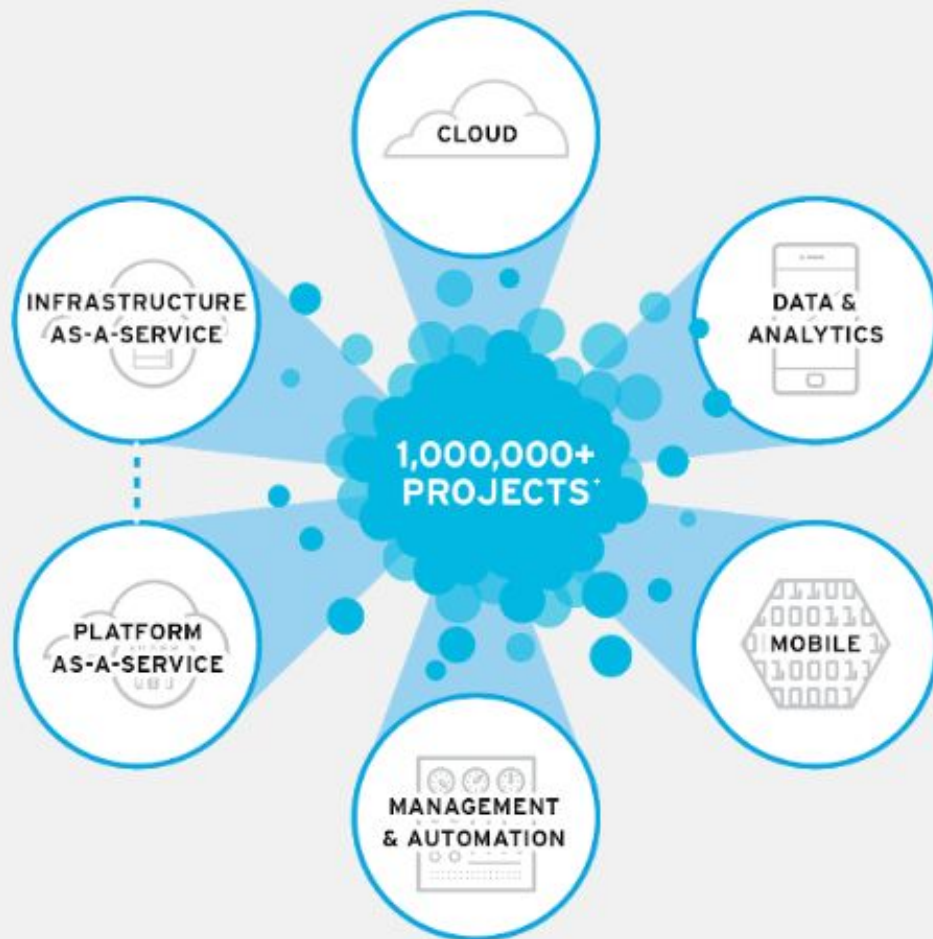
The human ecosystem of Open Source

- The largest ecosystem of continuous, open innovation

- An ecosystem of software development by passionate developers

- Fail-fast mode that constantly tries new ideas

- Global .. follow the sun .. 24x7

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Innovation must sustain at scale

Data

Devices

Users
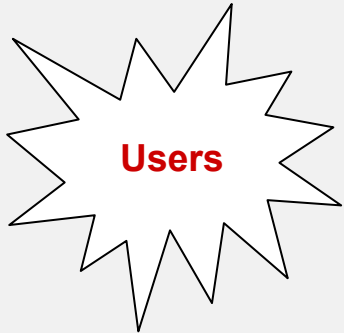
Gartner predicts 100 Billion connected things & 8 Billion people by 2030

Technologies

Applications

Social Media

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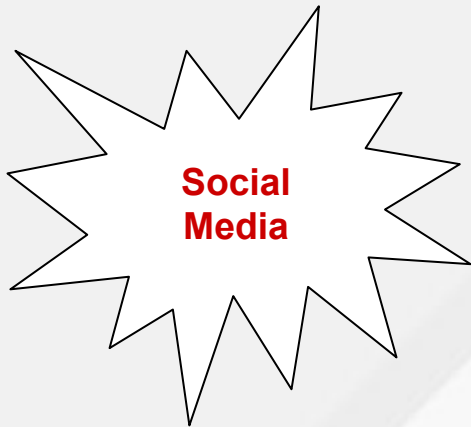
Augmenting Open Source Collective Intelligence

Monitor Projects

Inject Catalysts

Open Source Supermind

Identify Outcomes

Suggest Intersections

Measure Adoption

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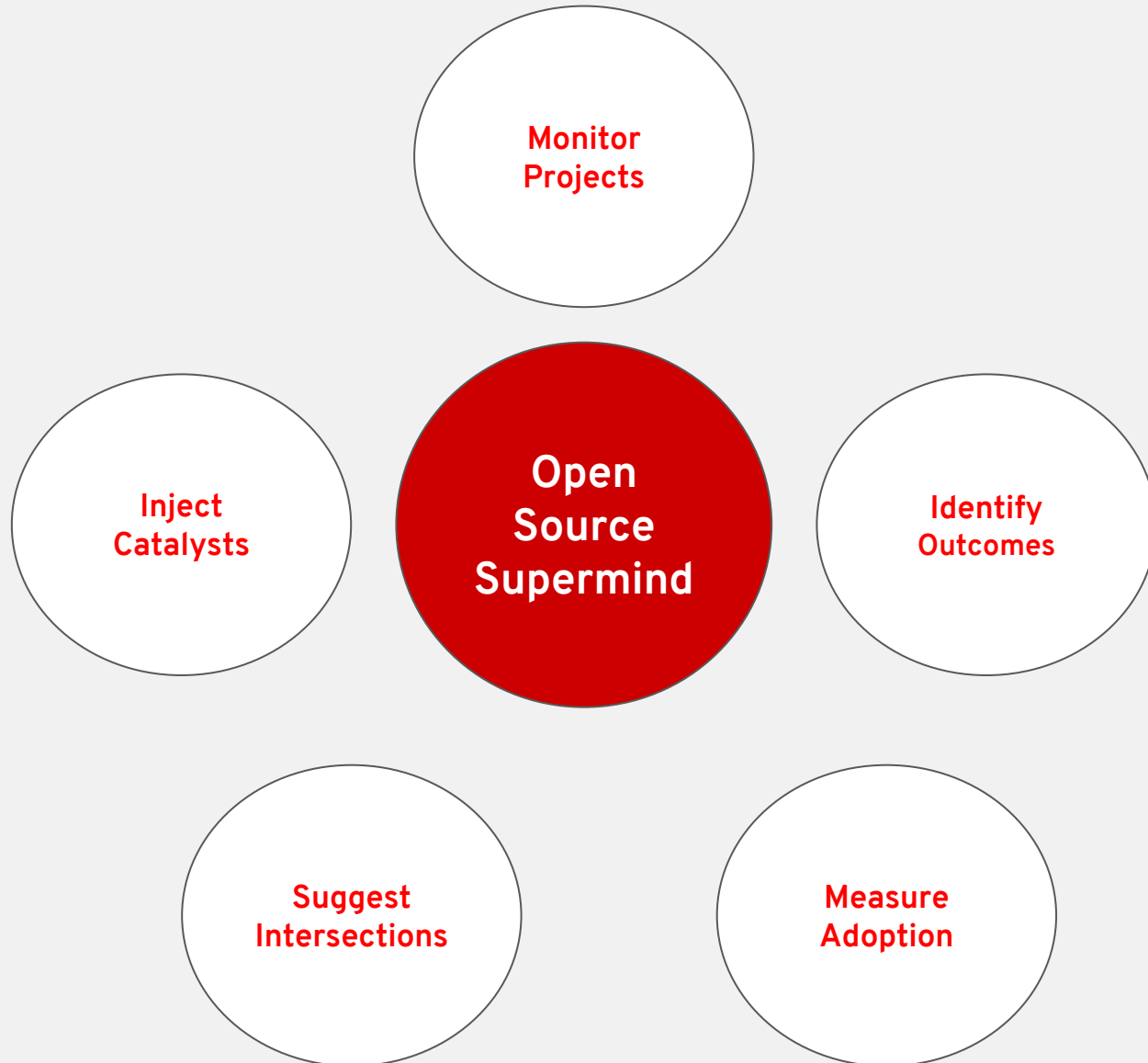
Augmenting Open Source

Activity	Open Source	Augmented Open Source
Monitor Projects	Many many projects, fail-fast, human collaboration	Processes project data and predicts failures faster
Identify Outcomes	Human projection of outcomes	Predict outcomes faster; Position for adoption
Measure Adoption	If they like it, they will come	Apply remedial measures that promote adoption
Suggest intersections	Human mind makes the connections with metaphors	Automated matching of patterns
Inject catalysts	Manual outreach	"Recognize" and connect potential communities

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It is not just Open Source
It is Innovation at Scale!

Collaboration

Shared problems
are solved faster

AI

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(both access and the
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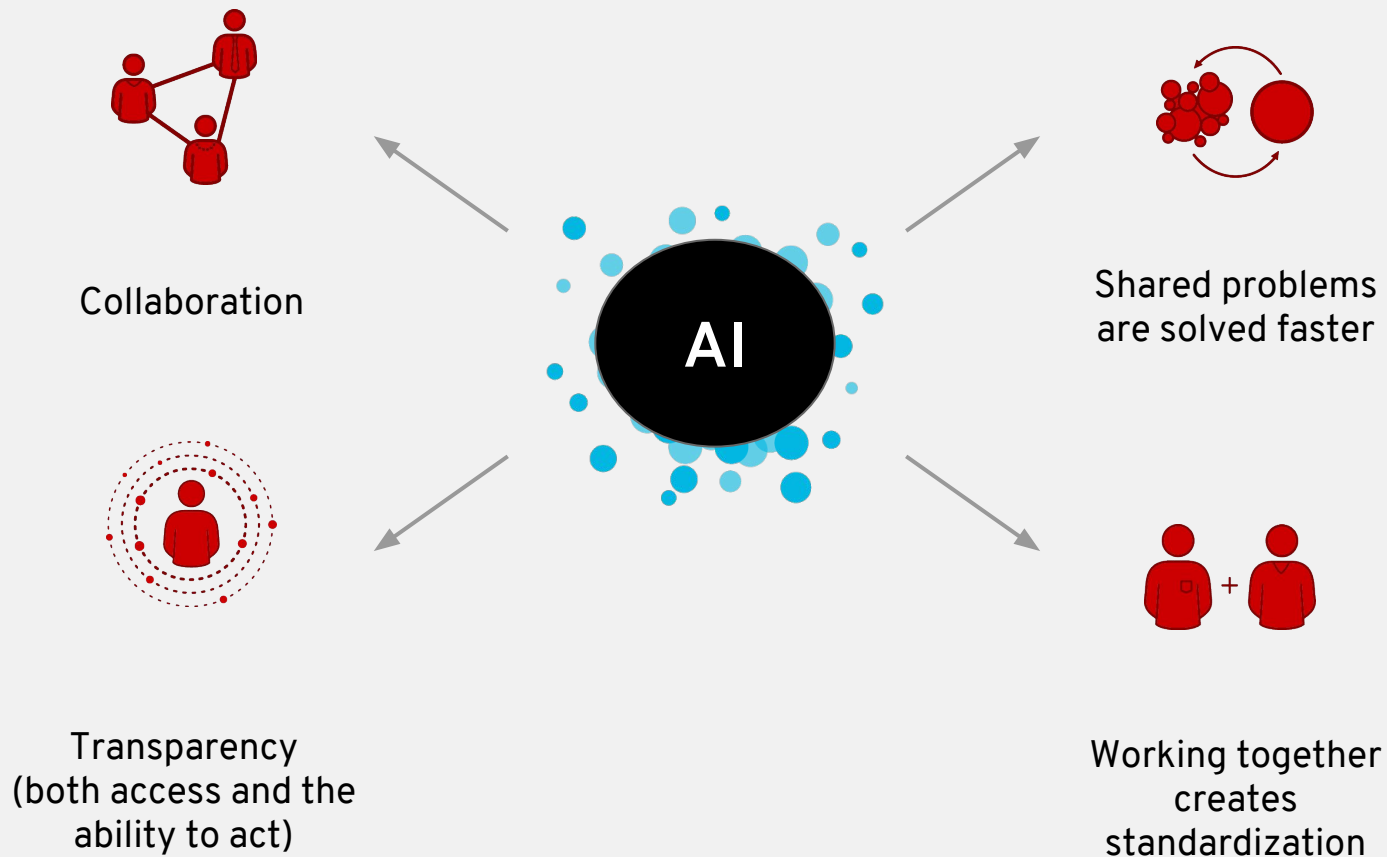
The Social Enterprise

Figure 1. The evolution of the social enterprise
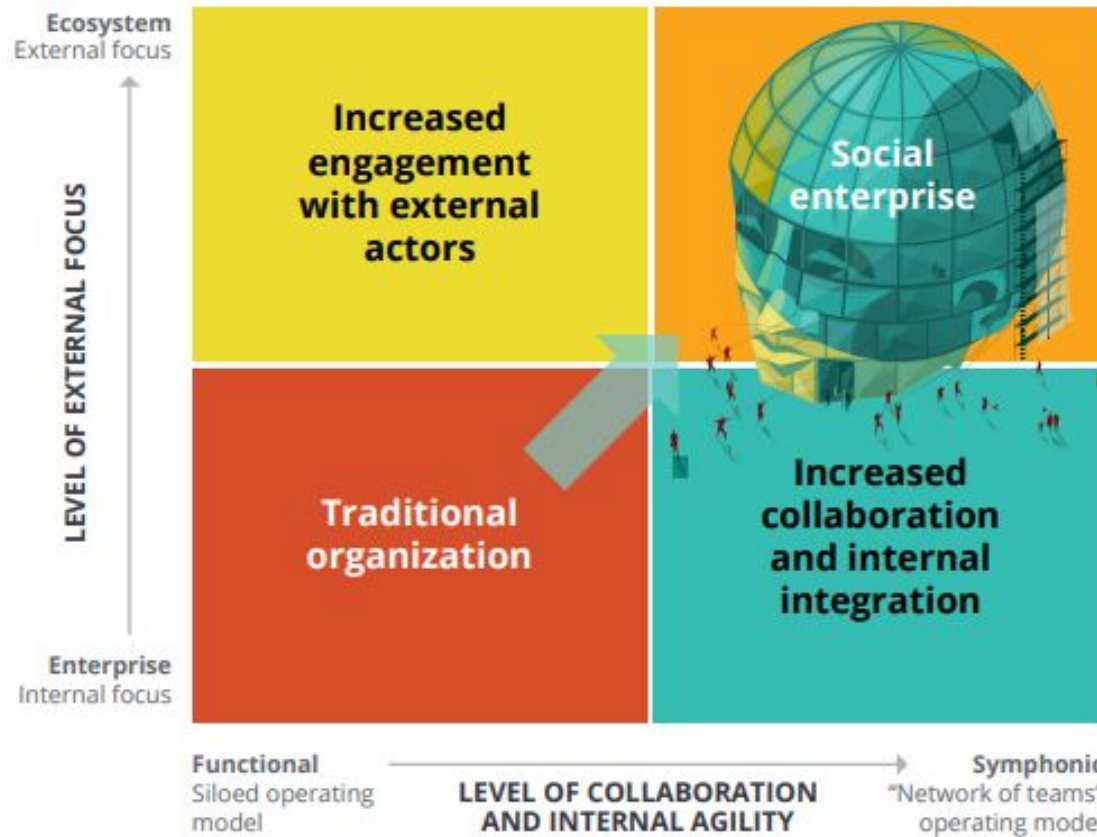
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Ecosystems can start young

Program encourages girls to start careers in STEM

This week, 6th-graders from Franklin Middle School participated in a training program that introduces girls to careers in STEM (science, technology, engineering and math). KARE 11's Adrienne Broaddus checked it out.

If your shine bothers anybody, tell them to wear shades!

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The Red Hat Portfolio of Innovation

Are you ready to scale innovation?
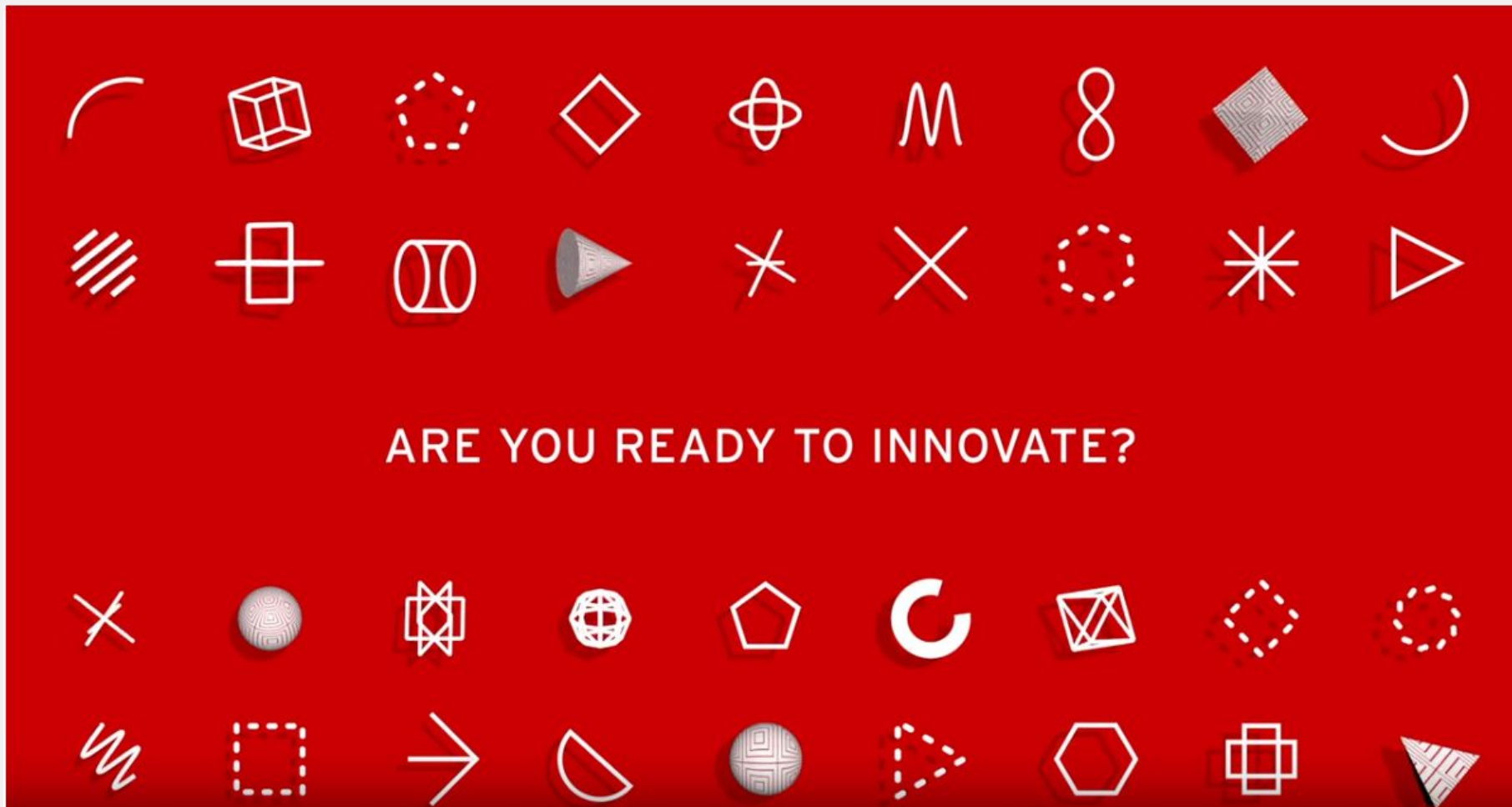
ARE YOU READY TO INNOVATE?

Booth #809

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