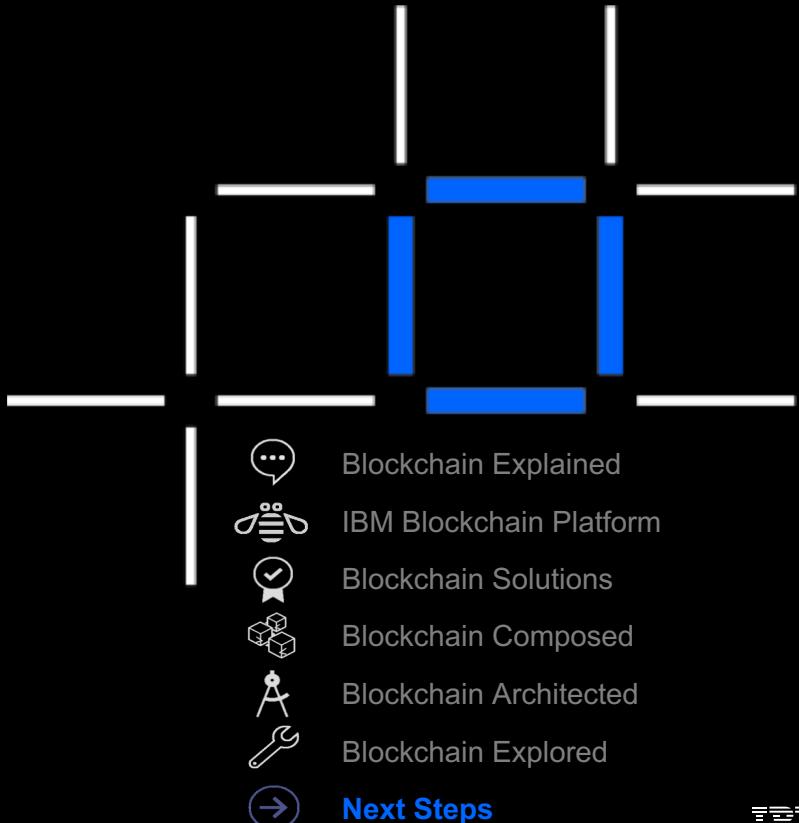


# Blockchain Next Steps

## How to Proceed to a First Project

Jin VanStee

*Blockchain and Transformation Leader  
NA Z Tech Sales*



# IBM Engagement Model recap

IBM Blockchain



1. Discuss Blockchain technology
2. Explore customer business model
3. Show Blockchain Application demo

1. Understand Blockchain concepts & elements
2. Hands on with Blockchain on Bluemix
3. Standard demo customization

1. Design Thinking workshop to define business challenge
2. Agile iterations incrementally build project functionality
3. Enterprise integration

1. Scale up pilot or Scale out to new projects
2. Business Process Re-engineering
3. Systems Integration

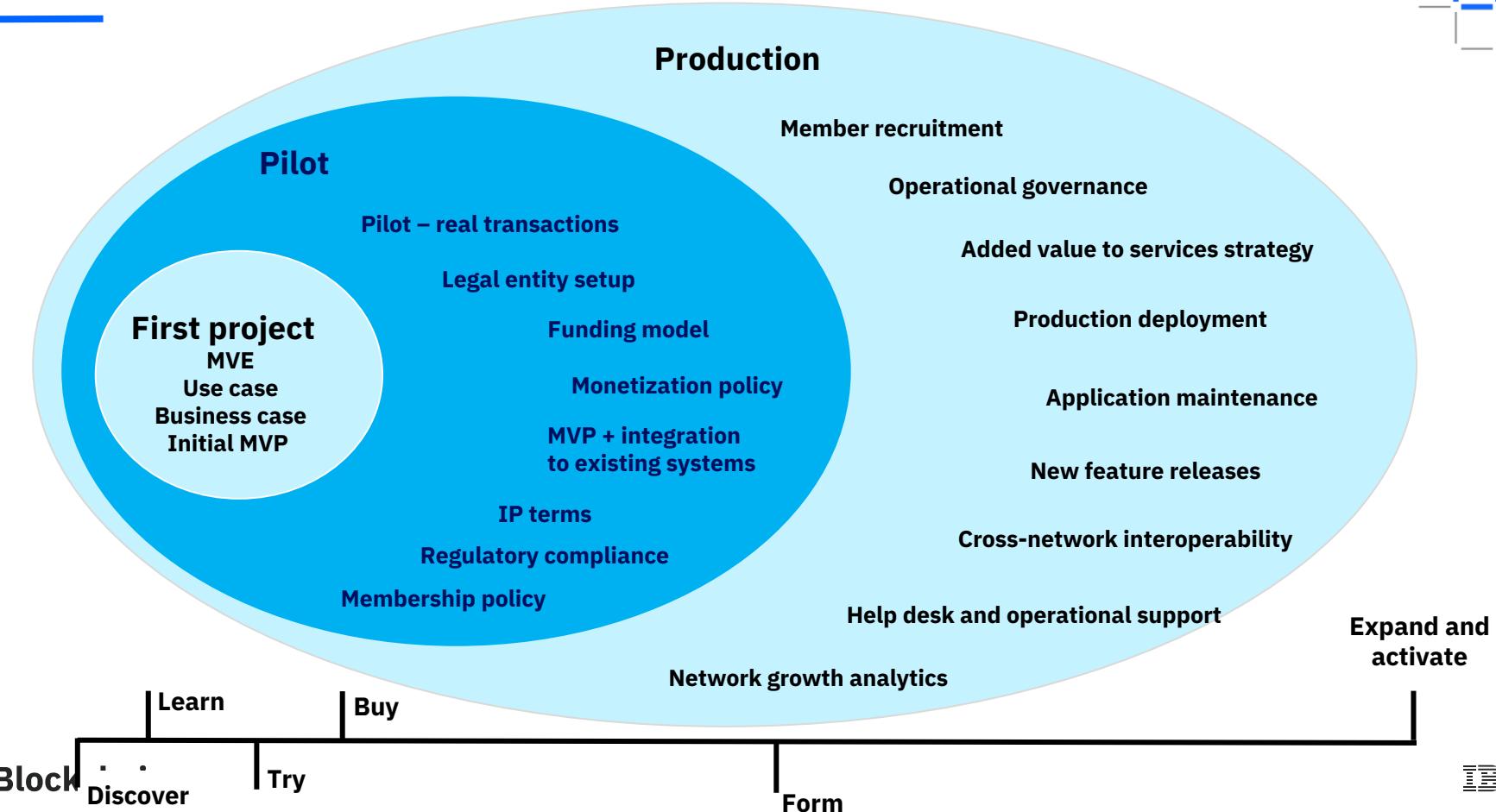
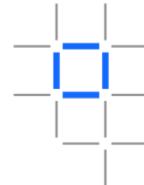
Remote

Digital or F2F

Face to face

Face to face

# Blockchain maturity model



# Continuing your blockchain journey...



## Business Stakeholder

- Request a business value assessment from IBM
- Prove out technology with a first project



**Blockchain BVA**

## Solution Architect

- Learn about blockchain use-cases and references
- Understand blockchain solution best practices



**Blockchain Solutions**

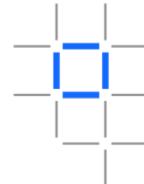
## Developer

- Play with IBM Blockchain Developer Tools
- Learn about Hyperledger Composer



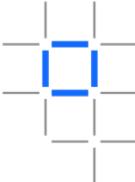
**Blockchain Composed**

# Cloud Garage locations



Leverage the IBM Cloud Garage with Blockchain for industry best practices in building and delivering blockchain solutions for your first project.

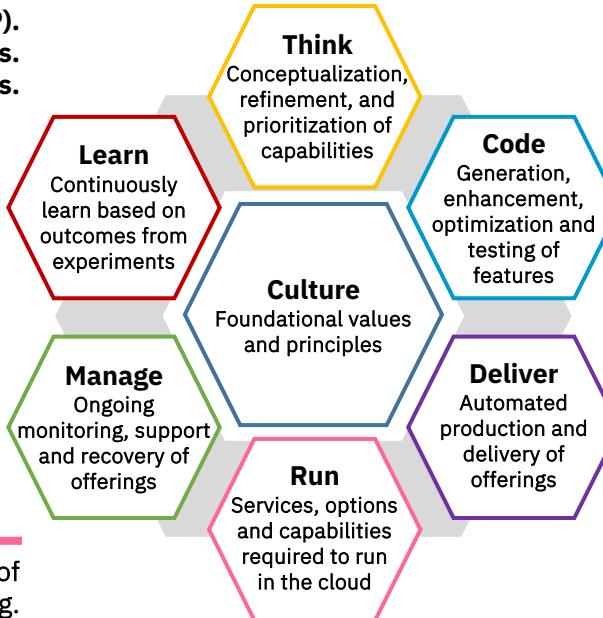
# Cloud Garage Method



Deploy the **minimum viable product (MVP)**.  
Gather feedback from **sponsor users**.  
Drive improvements with **iterations**.

Use **IBM Blockchain** to develop, govern and operate networks.

Leverage the **IBM Cloud platform** instead of worrying about the plumbing.



Begin with an **IBM Design Thinking workshop** to design a solution that meets user needs and delivers business value.

Use the agile method **called extreme programming** for MVP projects.

Use **DevOps** coupled with **test-driven development**.

*The Cloud Garage Method and blockchain expertise combines industry best practices for building and delivering blockchain solutions.*

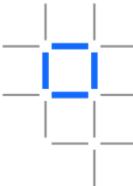
# Discovery Workshop with Blockchain

---

*Understand market opportunities and select a use case that represents the value that your organization and your business network seek. Gain a deeper insight into blockchain technology.*

- Use Cases
- 1) Letter of Credit
  - 2) Corporate Debt (or B
  - 3) Consortium Shared Le
  - 4) Commercial Paper
  - 5) Tri-Party P...

# Discovery Workshop with Blockchain



OFFERING AT A GLANCE

**Up to a half day** in one of our worldwide IBM Cloud Garage locations to explore blockchain use cases

## Offering activities and details

Come to one of our worldwide IBM Cloud Garage locations, embedded within technology incubators in some of the world's largest startup communities.

Take the opportunity in this half-day, no charge offering to engage with Cloud Garage staff and learn how we can help you to achieve your business goals through innovation with blockchain.

### Goals

- Understand how the IBM Cloud Garage works.
- Obtain an overview of IBM Cloud and IBM Blockchain.
- Clarify your opportunity space (the use case and/or the current pain points) and learn how to get started.
- Tour the IBM Cloud Garage.

### Client participants

- **Line-of-business executives** - business leaders looking for innovative ways to grow their business
- **CIO and technology executives** – leaders who want to learn how the Garage can help increase IT speed and close the gap between business and IT
- **Non-technical line-of-business teams** – participants who want to explore new ways to solve business challenges

### Prerequisites

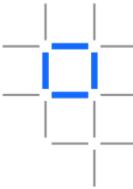
- Contact your IBM sales representative to schedule a visit.

### Deliverables

- None

# Discovery Workshop with Blockchain

---



## AGENDA

Activity	Length
Introductions	15 minutes
Blockchain level-set: IBM strategy, terminology, use case considerations	45 minutes
Use case ideation	90 minutes
Break	15 minutes
Prioritize use cases	15 minutes
Next steps	30 minutes

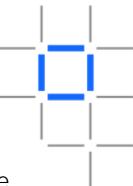
# Design Thinking Workshop with Blockchain

---

*Apply IBM Design Thinking principles to evaluate current business processes, identify the business network, and define the minimum viable product for your blockchain solution.*



# Design Thinking Workshop with Blockchain



OFFERING AT A GLANCE

**One week** of blockchain solution design at a worldwide IBM Cloud Garage location or at a pop-up Garage near you

## Offering activities and details

In this workshop, your line of business and technical teams join the IBM Cloud Garage team in a very **interactive experience** to identify and understand the end-user, obtain alignment on the business outcome, **evaluate for blockchain fit**, and identify the smallest application – the minimum viable product (MVP) – required to test your wanted business outcomes.

The workshop consists of two days of collaborative activities to define the MVP, followed by 2-3 days of high-level architecture and conceptual design definition.

### Goals

- Align stakeholders on the business opportunity and use case.
- Understand the business network and the roles within it.
- Evaluate for blockchain technical fit.
- Determine a hypothesis based on assumptions and risks.
- Define goals and an MVP to test the hypothesis.

### Client participants

- **Executive sponsor**, who is the voice of the business and its success
- **Line-of-business representative**, who provides context around the existing business process
- **IT or development team** representative, who understands the current IT strategy and/or builds what is defined in the workshop
- **Product owner**, who understands the users, the ecosystem, and the future trends of the application to be developed
- **Sponsor user**, who represents the end-user community
- **Business network**, which includes the above listed roles, from multiple business network members

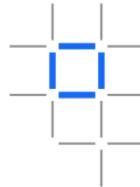
### Prerequisites

- Agreement between your organization and IBM on the business opportunity.
- Identification of the required participants, based on the use case

### Deliverables

- Workshop outcomes deck and blockchain MVP project definition

# Design Thinking Workshop with Blockchain



## AGENDA

Morning - Day 1	Afternoon - Day 1	Morning - Day 2	Afternoon - Day 2
Welcome and introductions	As-is process	Solution ideation	MVP hypothesis
Blockchain overview	Use cases and blockchain fit	Hill statements	MVP business network
Explore business hypothesis	Business network exploration	Storyboarding	Technical deep dive
Goals and non-goals	Empathy mapping	To-be process	Retrospective
			Next steps

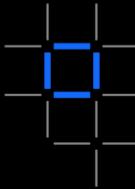
# MVP Build-up with Blockchain

*Develop a functioning blockchain solution using agile methodologies, leveraging experts in IBM Blockchain, UX/UI design and development, and cloud architecture.*

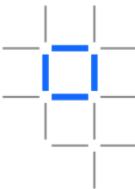
The image displays three distinct digital interfaces related to blockchain technology:

- Top Left:** A 3D isometric city map illustrating a network of roads, buildings, and energy infrastructure. Overlaid on the map are several circular icons representing energy nodes or sensors. Below the map, a horizontal bar tracks "Community energy usage".
- Bottom Left (Will Documents on Blockchain):** A web-based application for managing will documents. It includes:
  - A sidebar listing users: Tina Trotter (Testator), Edwin Eagleson (Executor), Ben Bright (Beneficiary), and Gary Grant (Witness). Each has a "REGISTER" button.
  - A main panel for "Will documents" showing "User details" (Tina Trotter) and "Assets & Obligations".
  - Details for the will document: "Document version: 1, updated: 2017-06-02 @ 9:21 am".
  - A table for asset distribution:

Asset	Distribute To
2014 Mazda 3 LX	Ben Bright
2016 Ford Mustang GT	Ben Bright
  - Buttons for "ADD ASSET INSTRUCTION", "SAVE CHANGES", and "Status: Committed".
- Right Side (Household Energy App):** A mobile phone screen showing a household energy management application. The app's header indicates it's for "The Miles Family" at "A medium home on the west side". It displays:
  - "Energy savings \$101" and "Energy coins 0".
  - A "Household Stats" section with sliders for "Energy efficiency", "Energy generation", and "Greenhouse Gas Reduction".
  - Icons for "Jeff's house (\$139)" and "Household robot".



# MVP Build-up with Blockchain



OFFERING AT A GLANCE

**Blockchain MVP development** at one of our worldwide IBM Cloud Garage locations with our Cloud and Blockchain experts

## Offering activities and details

The MVP Build-Up offering is designed to help your development team **learn fast, test hypotheses, and iterate quickly** – as they build and deploy a blockchain minimum viable product (MVP) using IBM Cloud and IBM Blockchain.

The objective is to quickly develop a production-quality blockchain MVP application using the **IBM Cloud Garage Method** and to obtain rapid and iterative end-user feedback to test a business hypothesis. Teams use pair programming, test-driven development, continuous integration and delivery and other agile and DevOps practices with tools and services **on IBM Cloud and IBM Blockchain Platform**.

### Goals

- Rapidly build production quality code for the blockchain MVP.
- Deploy the MVP and obtain user feedback to test a hypothesis.
- Learn how to apply the IBM Cloud Garage Method to transform your application design and development.

### Client participants

- **Product owner** – prioritizes user stories and makes pivot decisions
- **Developer** – pairs with Garage developers to build the MVP
- **Sponsor user** – represents user community and provides feedback

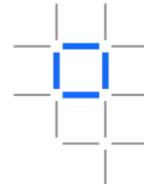
### Prerequisites

- Blockchain MVP definition through IBM Cloud Garage Design Thinking Workshop with Blockchain
- Entitlement for IBM Cloud to serve as a development and deployment platform

### Deliverables

- MVP application, including source code, delivered on IBM Cloud

# MVP Build-up with Blockchain



TEAM COMPOSITION



ENGAGEMENT  
LEADER (PT)



PROJECT  
MANAGER



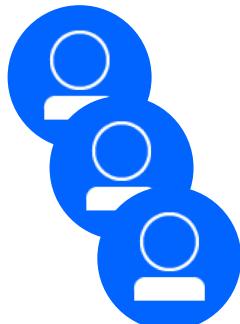
BUSINESS  
EXPERTS



BLOCKCHAIN  
ARCHITECT (PT)



UX-DESIGNER  
(PT)



UI, CLOUD, AND  
BLOCKCHAIN  
DEVELOPERS

IBM

Client(s)



EXECUTIVE  
SPONSOR



PRODUCT  
OWNER



SUBJECT MATTER  
EXPERTS



DEVELOPERS\*

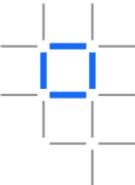
PT = part time  
\* as appropriate

# Architectural Consultancy with Blockchain

*Enlist the support of a blockchain architect in an IBM Cloud Garage to help you define the framework of your blockchain solution.*



# Architectural Consultancy with Blockchain



OFFERING AT A GLANCE

**One week** architecture engagement delivered remotely, onsite, or at one of our worldwide IBM Cloud Garage locations

## Offering activities and details

This service includes an IBM Cloud Garage blockchain architect to provide **thought leadership, advice, and guidance to help you plan the architecture** for an enterprise blockchain solution. Although not limited to the following activities, the service offering can include:

- **Architectural advisement** on a selection of a variety of topics, including Hyperledger Fabric, Hyperledger Composer, IBM Blockchain Platform, blockchain development patterns, and security/compliance requirements.
- **Assessment of effort** to refactor or move applications to the cloud.

### Goals

- Review and validate a use case with stakeholders.
- Plan the architectural design and scope to build and deploy the use case.

### Client participants

- **IT or development team** representative who understands the current IT strategy and/or builds what is defined in the workshop
- **Product owner**, who understands the users, the ecosystem, and the future trends of the application to be developed

### Prerequisites

- Identify a use case that is either defined in an IBM Cloud Garage Design Thinking Workshop with Blockchain or is an existing application considered for migration to a cloud environment.

### Deliverables

- None

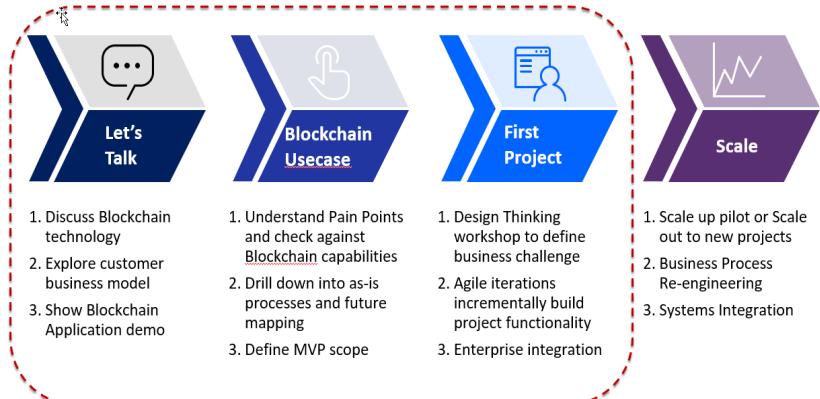
# Announcing the newest IBM Pop-Up Garage

in our Poughkeepsie home of the mainframe or your location

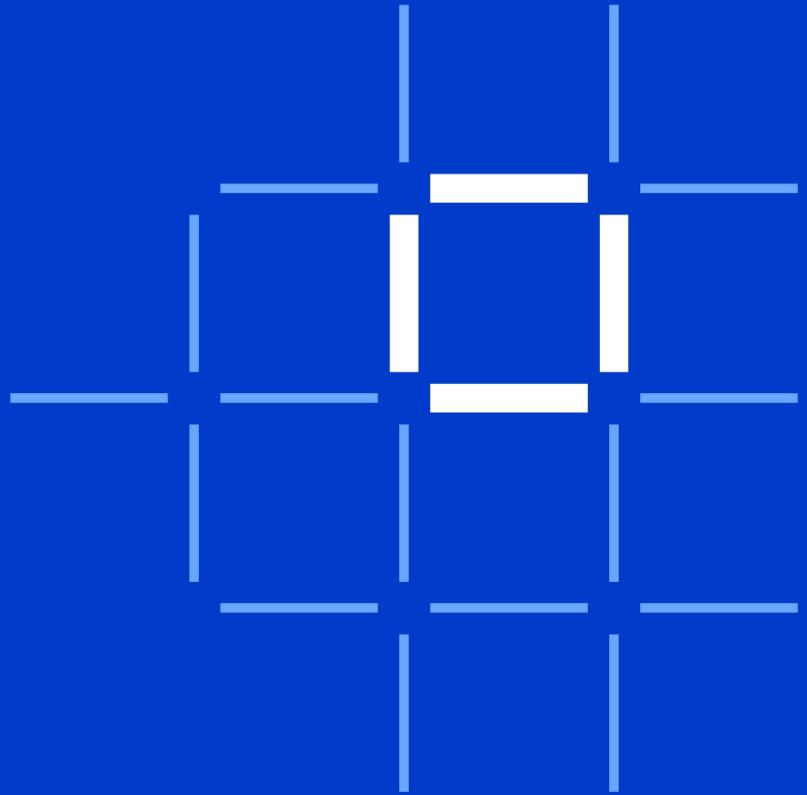
- Workshops focus on Client Business Challenge
- Quickly design and prototype innovative solutions using industry best practices
- Develop and deploy with experts from IBM Systems Client Centers and across IBM
  - Blockchain
  - Z as a Service
  - application of your choice
  - Quantum – coming soon
- Contact us: [design@us.ibm.com](mailto:design@us.ibm.com)



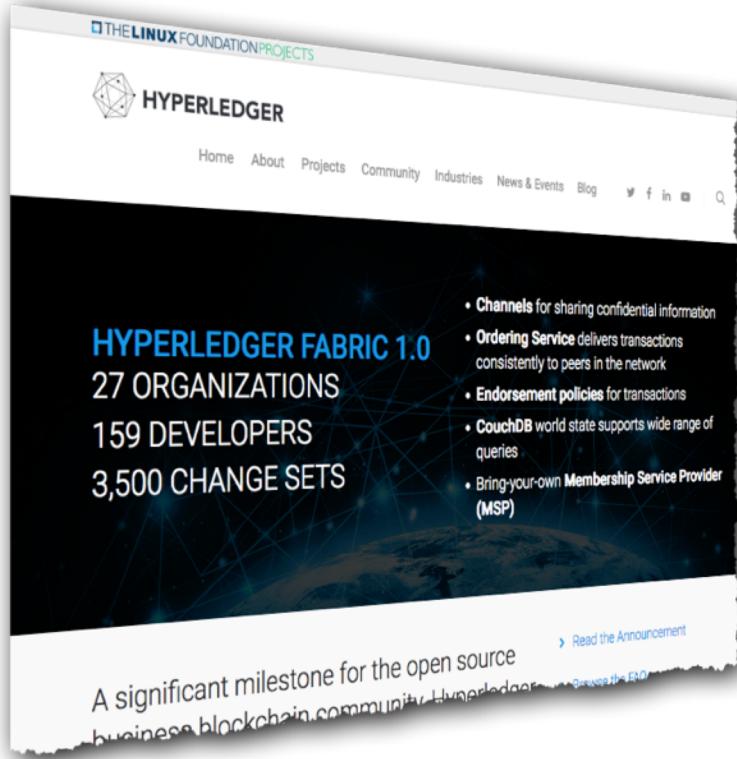
## Garage Service Model overview



# *Our technologies*



# Hyperledger Fabric



*The foundation for developing blockchain applications for business*

A distributed ledger platform with an emphasis on ledger, smart contracts, consensus, confidentiality, resiliency, and scalability.

V1.0 released July 2017

- 159 developers from 27 organizations
- IBM is one contributor of code, IP, and development effort to Hyperledger Fabric

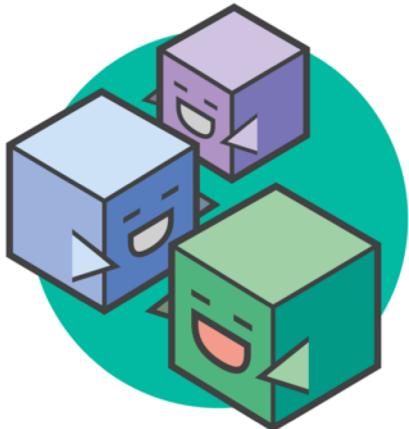
<http://hyperledger-fabric.readthedocs.io/>

# Hyperledger Composer

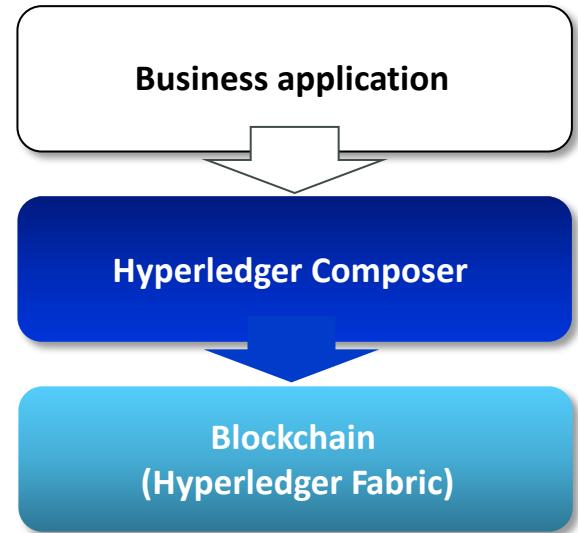
*Accelerating Blockchain solution time-to-value*

<https://hyperledger.github.io/composer/>

- Use a suite of high-level application abstractions for business networks.
- Focus on **business-centric vocabulary** for quickly creating solutions.
- Reduce risk and increase understanding and flexibility.



- Features:
  - Model your business networks, test, and expose through APIs.
  - Use applications to start transactions to interact with a business network.
  - Integrate existing systems of record.
- Fully open and part of Linux Foundation Hyperledger.
- Try it now: [composer-playground.mybluemix.net](https://composer-playground.mybluemix.net)



# IBM Blockchain

The only **fully integrated, enterprise-ready blockchain platform** designed to accelerate the development, governance, and operation of a multi-institution business network.

Based on the Hyperledger Fabric V1 runtime, optimized for enterprise requirements.

Specialized compute for **security, performance and resilience**.

Delivered through the IBM Cloud on a global footprint with 24x7 integrated support.

**Full lifecycle tools** to speed activation and management of your network.

## Develop

Explore and accelerate development time with tools that ensure close alignment between business leaders and developers.

## Govern

Speed activation, customization, and management of your business network with democratic, multi-party governance tools.

## Operate

Deploy and operate always-on networks with production-ready enterprise performance and security for most demanding use cases.

[[http://ibm.biz/Platform\\_Demo](http://ibm.biz/Platform_Demo)]

For more information, see  
[www.ibm.com/blockchain/garage](http://www.ibm.com/blockchain/garage)

[www.ibm.com/blockchain](http://www.ibm.com/blockchain)

[developer.ibm.com/blockchain](http://developer.ibm.com/blockchain)

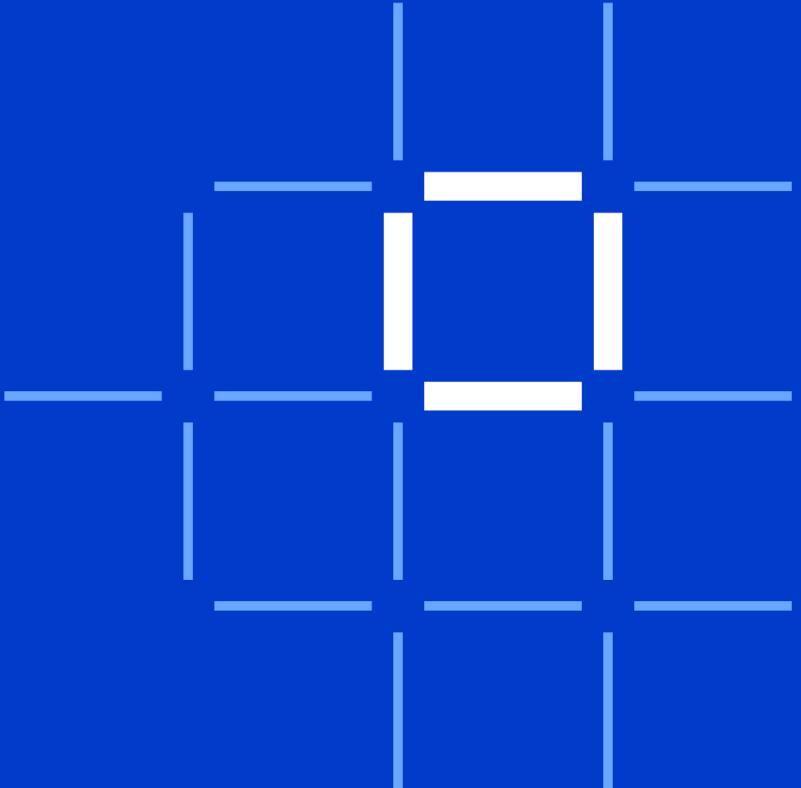
[www.hyperledger.org](http://www.hyperledger.org)

*Questions? Tweet us or  
go to [ibm.com/blockchain](http://ibm.com/blockchain)*

 @IBMBLOCKCHAIN

 IBM Blockchain

 IBM Blockchain





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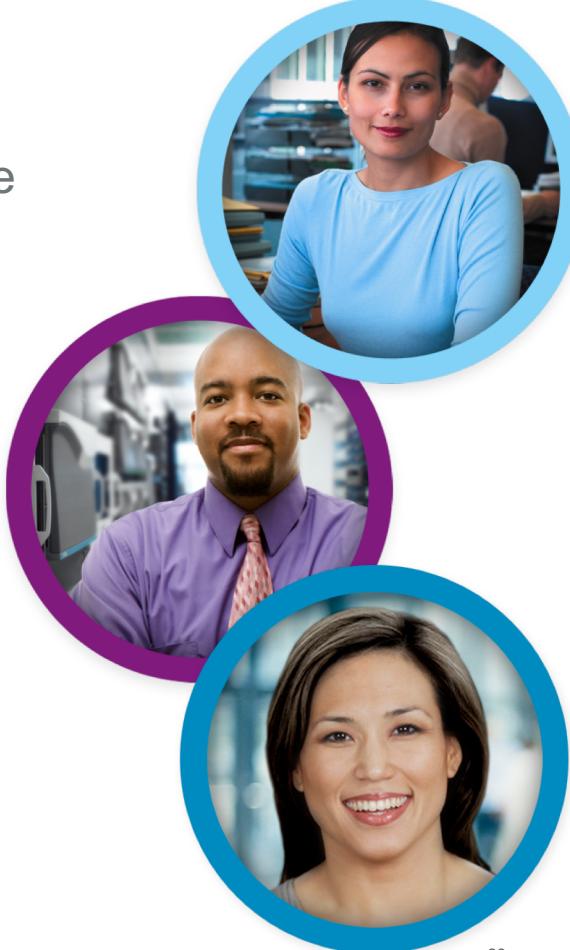
# Why Design Thinking for Blockchain?

- Blockchain technology is new, hyped, misunderstood
- IBM is making blockchain real for business networks
- Requirements often unclear
- Multiple teams from customer will be involved
- Usually sponsored by user / transformation leaders
- Hence ideally suited to Design Thinking & Agile Development



# Design Thinking Workshop structure

- The workshop aims to explore and elaborate a use-case
  - A two day tailored event for clients and IBMers
  - A natural lead in to agile development sprints
- Focus on group exercise rather than presentation
  - Crucial for shared understanding and “buy-in”
- Breakout teams to understand and develop personas
  - One team per persona
  - Usually 4-6 workshop participants per persona
  - Requires people who can represent the persona
  - Mix of business and technical, IBM and client
  - Continual playbacks to stay on track



# What our work will look like



Empathy Map



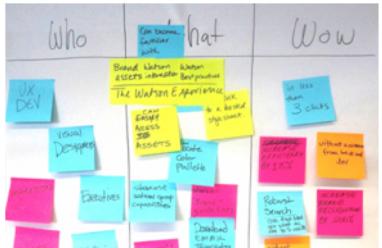
As-Is Scenario Map



Explore Ideas



Prioritize our Ideas



Draft Hills

A business user can get access to web applications needed to do this/her job in 1

Refine Hills

Hills

Bobby, an internal Millennial engineer, can prioritize & understand tasks assigned to him in a single place without having to install anything

Stakeholder Playback



To-Dos

# Where?

## Ideal Location

- IBM Garage, Design Studio or your location

## Key requirements:

- Enough wall space
- Lots of white boards and flip charts
- Facilities & equipment

No remote participation!



# The workshop has a modular structure

## [A] Use Case

Clear business focus  
for success



## [B] User

User-centric direction  
for the First Project



## [C] Hills

A clear view of where  
we are going



## [D] Going Agile

Incremental route to  
project success



# Typical two-day agenda

## [A] Use Case



Introductions &  
Blockchain Recap

Use Case Selection

Blockchain Fit

Business Network

## [B] User



Design Thinking

Empathy Mapping

As-is Experience

Explore Possibilities

Focus Outcomes

## [C] Hills



Needs Statements

Build Hills & Check Fit

Playback

Prioritize Hills

## [D] Going Agile



To Be Scenario

First Project Method

Sprint Zero

Non-functional Details

Action Plan

# Participation from clients

Right BUSINESS people who . . .

- Understand business area
- Can explain the current “as-is” state
- Can commit to the workshop & circa 20% to sprints
- Have access to (or are) a stakeholder

Also consider

- Innovation cell / team members
- IT Department (DEV & UX)



# Participation from IBM

## Workshop facilitation

- Leader
- One facilitator per persona group

## Subject Matter Expert

- Blockchain expert

## Dev team

- UX person / designer
- Scrum Master and / or Dev lead



# What we will use

1 : Large sticky notes (76mm x 127mm) - one pack (of 100) per participant



2 : Permanent marker pens - fine point - black - one per participant



3 : Large whiteboards / wall space (for sticking post it notes on) - as much as possible



4 : Flip chat pads & stand / hanger - one for every 5 participants



5 : Projector - high resolution & screen



6 : Sticky Coloured Circles - 10 of each colour per participant



7 : Blu-Tack (or similar) - 1 pack



# Thank you

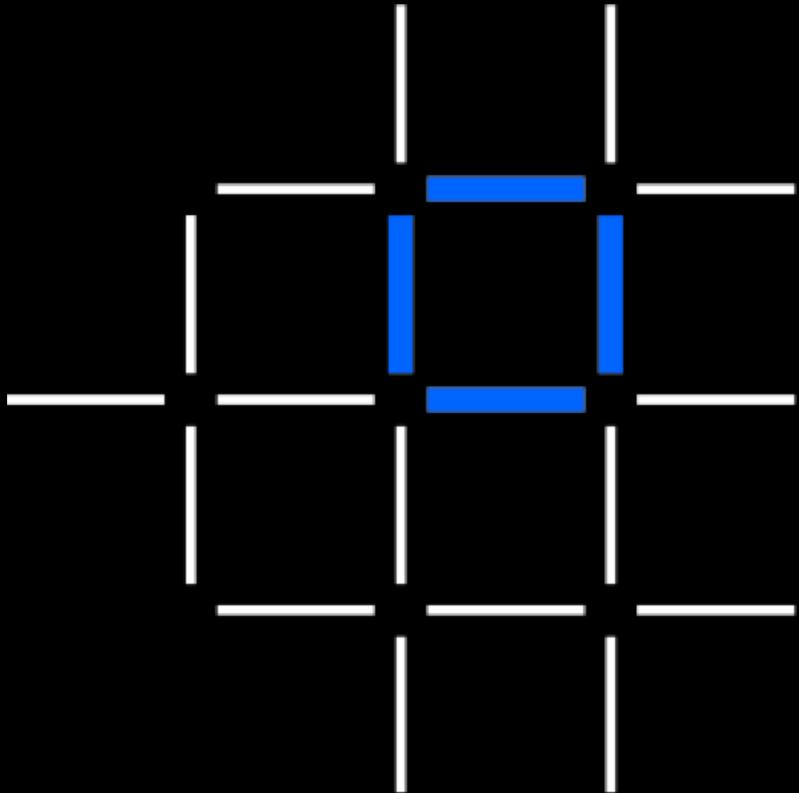
Jin VanStee

Questions? Tweet us or go to  
[ibm.com/blockchain](http://ibm.com/blockchain)

 @IBMBlockchain

 IBM Blockchain

 IBM Blockchain



IBM Blockchain

IBM



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