Solutions Explained

IBM Blockchain Networks

Blockchain Explained Series

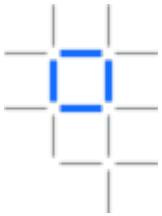
- Blockchain Explained
- IBM Blockchain Platform Explained
- **Solutions Explained**
- Garage Explained
- Next Steps

V0.1, 23 May 2018

IBM **Blockchain**

Good blockchain use-case or bad?

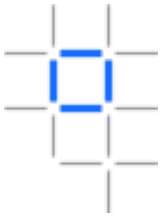
What makes a good blockchain use case?



– Identifying a good blockchain use-case is not always easy!
  – However there should always be:

1. A business problem to be solved
   - That cannot be more efficiently solved with other technologies
2. An identifiable business network
   - With Participants, Assets and Transactions
3. A need for trust
   - Consensus, Immutability, Finality or Provenance

What makes a good first blockchain use case?

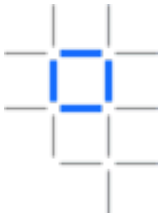


– First use-cases are even more difficult to identify!

1. A limited scope, but still solves a real business problem
   - Minimum Viable Product in a few weeks of effort
2. A smaller business network
   - Usually without requiring regulators and consortia
3. Allows for scaling with more participants and scenarios
   - Consider shadow chains to mitigate risks

Start small, succeed and grow fast!

Sample questions to ask for the selected use case:



1. What is the specific business problem / challenge that the first project will address?
2. What is the current way of solving this business problem?
3. Assuming the business problem is large, what specific aspects of this business problem will be addressed?
4. Who are the business network participants (organizations) involved and what are their roles?
5. Who are the specific people within the organization and what are their job roles?
6. What assets are involved and what is the key information associated with the assets?
7. What are the transactions involved, between whom, and what assets are associated with transactions?
8. What are the main steps in the current workflow and how are these executed by the business network participants?
9. What is the expected benefit of applying blockchain technology to the business problem for each of the network participants?
10. What legacy systems are involved? What degree of integration with the legacy systems is needed?

It is important to ideate potential use-cases

Day 1

[A] Use Case

Blockchain Recap	30
Use Case Selection	30
Blockchain Fit	20
Business Network	15

[B] User

Design Thinking	30
Empathy Mapping	45
As-is Experience	45
Explore Possibilities	30
Focus Outcomes	15

Day 2

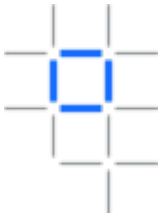
[C] Hills

Formulating Hills	60
Playback Hills	15
Refine Hills & Check Fit	35
Prioritize Hills	15

[D] Going Agile

Storyboarding	45
First Project Method	30
Sprint Zero	20
Non-functional Details	15
Action Plan	20

Assessing Business Value



- It can be difficult to accurately quantify investment case for blockchain

- Things to consider:
  - Existing Pain Points
  - Scope – participants, assets, transactions
  - Benefits: baseline, minimum viable ecosystem (MVE) & mature network
  - Blockchain Design Points
  - References

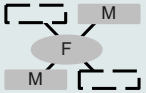
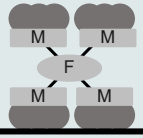
Blockchain Value Design (BVD) activity will help elaborate these items!

Template – example only (Cross Border Supply Chain)

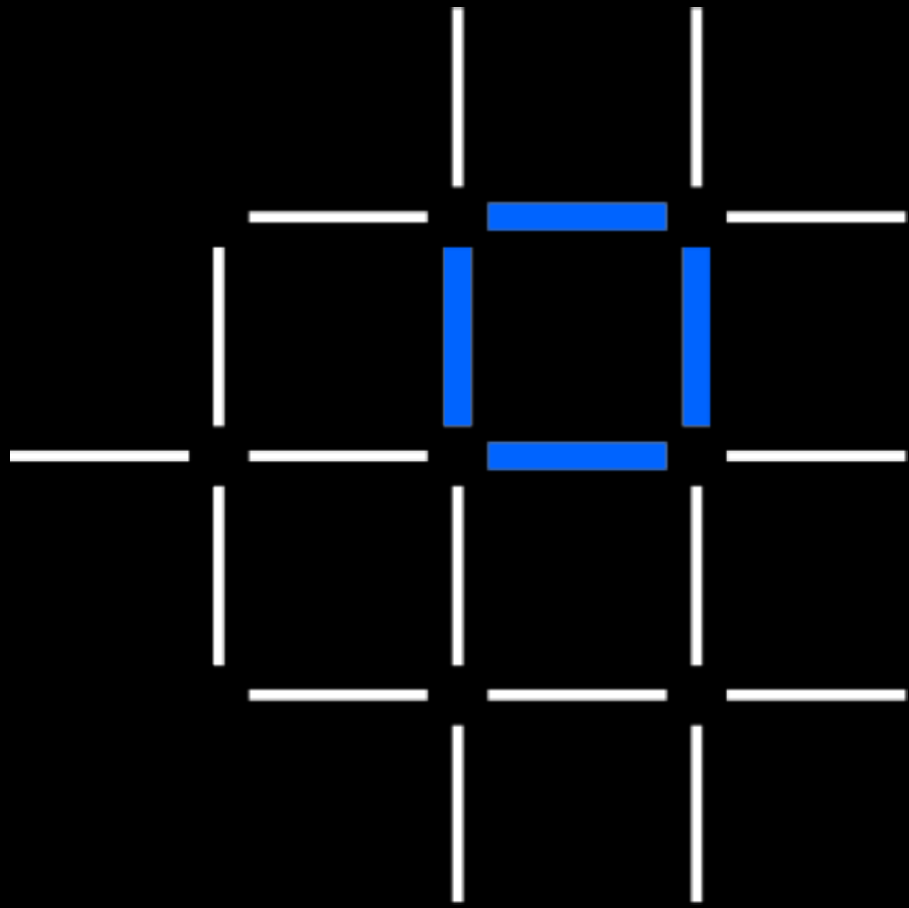
Problem	90% of goods in global trade are carried by the ocean shipping industry each year. Costs associated with trade documentation processing and administration are estimated to be up to 20% the actual physical transportation costs.
Solution	Manage and track the paper trail of tens of millions of shipping containers across the world by digitizing the supply chain process
Participants	Supplier, couriers (*2), customs (*2) , ports (*2), shipper and retailer ….
Asset & Trust	Need for trust around paperwork associated with a container
Transactions	Supplier prepares to ship, release container to courier, load to ship, clear customs, retailer receipt

Pain Points

- Transport remains highly dependant on a flood of paper that is never digitised
- Shipping information must pass through many hands, increasing potential for delays in transport.
- One shipment can require sign-off from 30 unique organizations and up to 200 communications.
- One lost form or late approval could leave the container stuck in port
- The entire process can take more than one month..
- Fraudulent changes may be made to the Bill of Lading

Benefits benchmarks - Value Tree KPI's (e.g.)		Baseline 	Phase 1 	Phase 2-3 	Blockchain : Design Points	References
New revenue	# new value propositions	-	-	1 to 3	• Find new value propositions to exploit the network effect between members	
Improve client experience	Increase in customer satisfaction	-	5%	10%	• Securely and transparently trace the container's path through the supply chain on the blockchain • Add trust (Immutability and Provenance) around the Bill of Lading and other container paperwork • Automate the transit and shipping process with Smart Contracts reducing cycle times and delays • No reconciliation or matching of documentation with near instant updates - eliminates the need for audit and verification • Removes paper and intermediaries	ANO -1
	Increase in trade volumes	-	+5%	+15%		
	Cycle times (transit & shipping)	30 days	25 days	10 days		ANO -2
Reduce transport costs	Waste as % of total shipped	6%	5%	1%		
	Fraud and errors as % of total costs	5%	4%	0.5%		
	Documentation admin. as % of total costs	20%	15%	5%		

Thank you



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