



**TRUST**CHAIN™

Mark Hanna  
CMO

RG

**RICHLINE GROUP**  
A BERKSHIRE HATHAWAY COMPANY

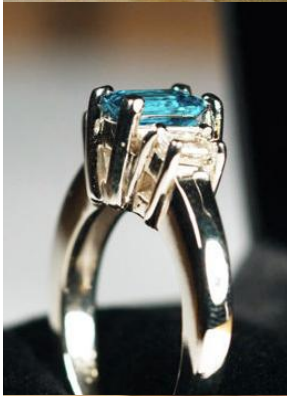
# Chain of Trust

*The jewelry industry begins embracing blockchain technology*





# WHY RESPONSIBLE MATTERS?



- [66% of consumers are willing to spend more on a product](#) if it comes from a sustainable brand. -Nielson's annual Global Corporate Sustainability Report, 2015
- 73% of surveyed millennials indicating a similar preference.
  - Additionally, 81% of millennials even expect their favorite companies [to make public declarations of their corporate citizenship](#). --Nielson's annual Global Corporate Sustainability Report, 2015
- Four Major Qualities in Socially Responsible Companies:
  - Invested in the betterment of society and the solution of social problems
  - Prioritize "making an impact" on the world around them
  - Open and honest about efforts
  - Involve customers in good works / give back
- [Nine in ten millennials would switch brands](#) to one associated with a cause



# Jewelry Industry Usage

Traceability and  
Transparency



Verifiable trust



Reduced Transactional  
friction



## **Blockchain™ - A New Business Model for Trust**

We are now experiencing the blockchain game-changer for the gold and diamond industries; creating new business models with documented provenance, authentic storytelling and consumer Trust

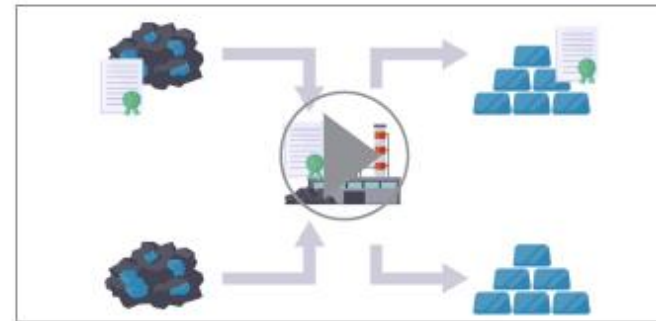


5T TRACKED  
TRACED  
TRANSPARENT  
TRUSTED  
TRUTHFUL

# UNDERSTAND THE FUNDAMENTALS OF IBM BLOCKCHAIN



**BlockChain** technology presents opportunities for disruptive innovation. It enables global business transactions with less friction and more trust.





# TOGETHER WE ARE MOVING THE INDUSTRY FORWARD



## Blockchain changes the game

Never before could disparate entities securely and confidently track and trace responsible sourcing from mine to brand owners

## Designed from the ground up as an industry platform

The end-to-end mineral/metals supply chain will be involved; the responsible sourcing blockchain platform is designed to be open to industry players

## The ecosystem will shape the solution

We are committed to continuously improve based on ongoing, regular input and feedback from customers, miners, smelters, environment watch organizations, and regulatory and compliance agencies

## We are moving fast

We know the speed to market and scale are critical and building the network is the key to success

## Strong support from IBM and Consortium members

With the support of IBM and consortium members, the Responsible Sourcing Blockchain Platform will have the global reach, executive support, and ability to execute in mining markets around the world



# APPLYING BLOCKCHAIN TO THE JEWELRY INDUSTRY

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FOCUSING ON THE CORE PRINCIPLE OF BLOCKCHAIN FACILITATING THE EXCHANGE OF TRUST, THERE ARE SEVERAL APPLICATIONS FOR THE JEWELRY INDUSTRY.

- **Provenance and authenticity of the product I;** *being able to demonstrate the provenance, authenticity and heritage of items of jewelry and creating experiences for the end user (e.g. enhancing the purchase experience, insuring jewelry products, securing the resale process)*
- **Provenance and authenticity of the product II;** *being able to enhance demonstration of ethical sourcing.*
- **Enhancing sustainability and compliance across the supply chain;** *being able to track, audit and ensure compliance requirements for responsible jewelers, plus reduce spend on random auditing.*
- **Streamlining the supply chain;** *being able to minimize the order, invoice and reconciliation process across the jewelry supply chain.*
- **Batch identification and tracking;** *being able to identify where in the supply chain batches of product are at all times.*





TRUSTCHAIN™

*"Socially responsible sourcing is imperative in the jewelry industry. The blockchain protocol/platform provides the technical system to optimize a chain of custody documentation inclusive of every participant in a product's journey."*

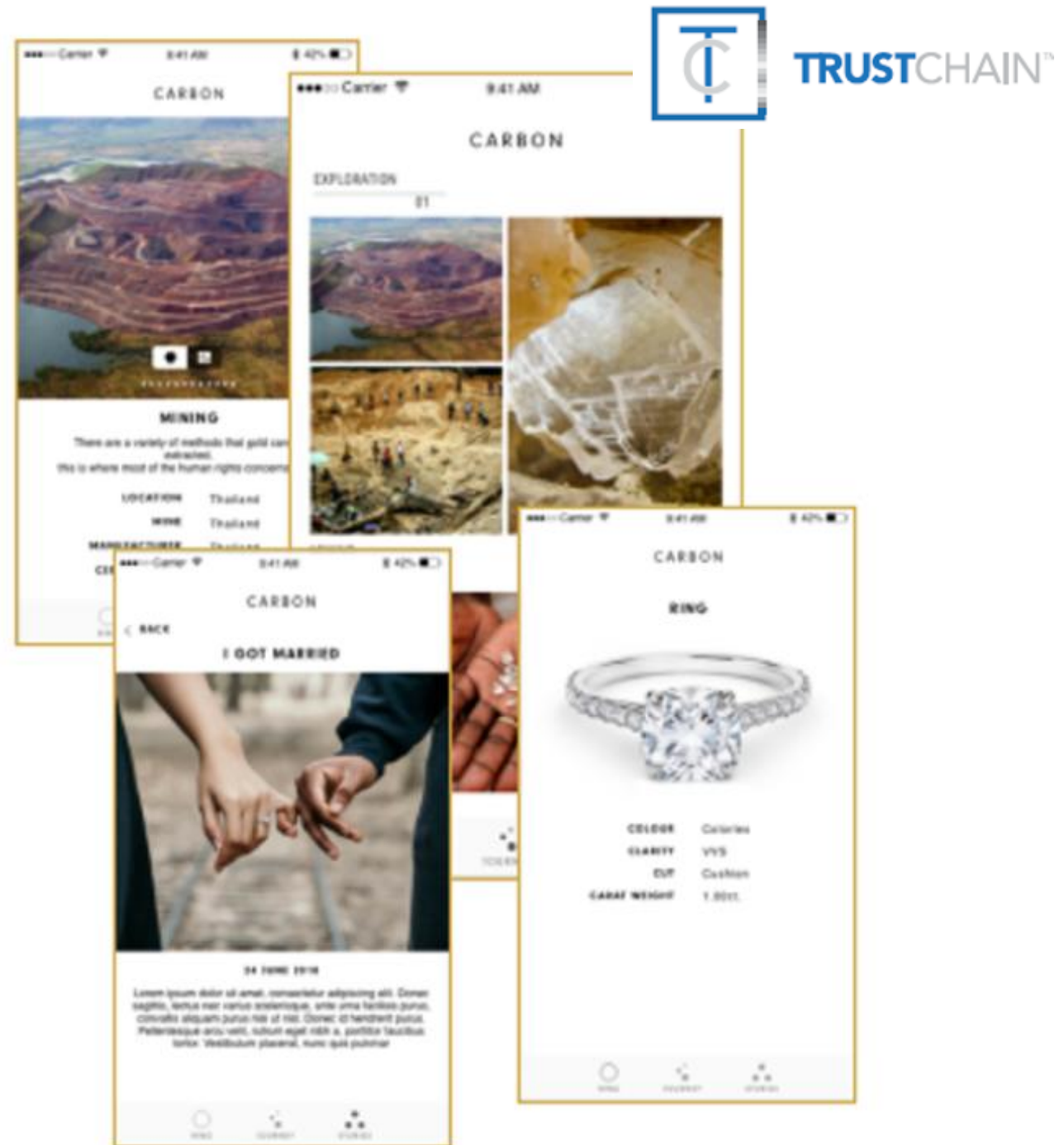
*—Mark Hanna*

# DEVELOPMENT OF Marketing CONCEPTS

# 73%

MILLENNIALS WILLING TO PAY MORE  
FOR SUSTAINABLE GOODS (NIELSEN 2015)

“ It will become increasingly important for luxury brands to be completely transparent about their ethical stances and show that they care about the planet and its people ”



# World Luxury Jewelry Market

*“It will become increasingly important for luxury brands to be completely transparent about their ethical stances and show that they care about the planet and its people.”*

EUROMONITOR INTERNATIONAL (2018)

**73%**  
**MILLENNIALS WILLING  
TO PAY MORE FOR  
“SUSTAINABLE GOODS”**

NIELSEN (2015)

**Forbes**

“Blockchain technology will serve as a key component in ensuring the sustainability of consumer demand for luxury jewelry.”



# Future World Jewelry Market



So if the reputation of the **Gold Industry** affects everyone in the industry, we need to address these issues together.

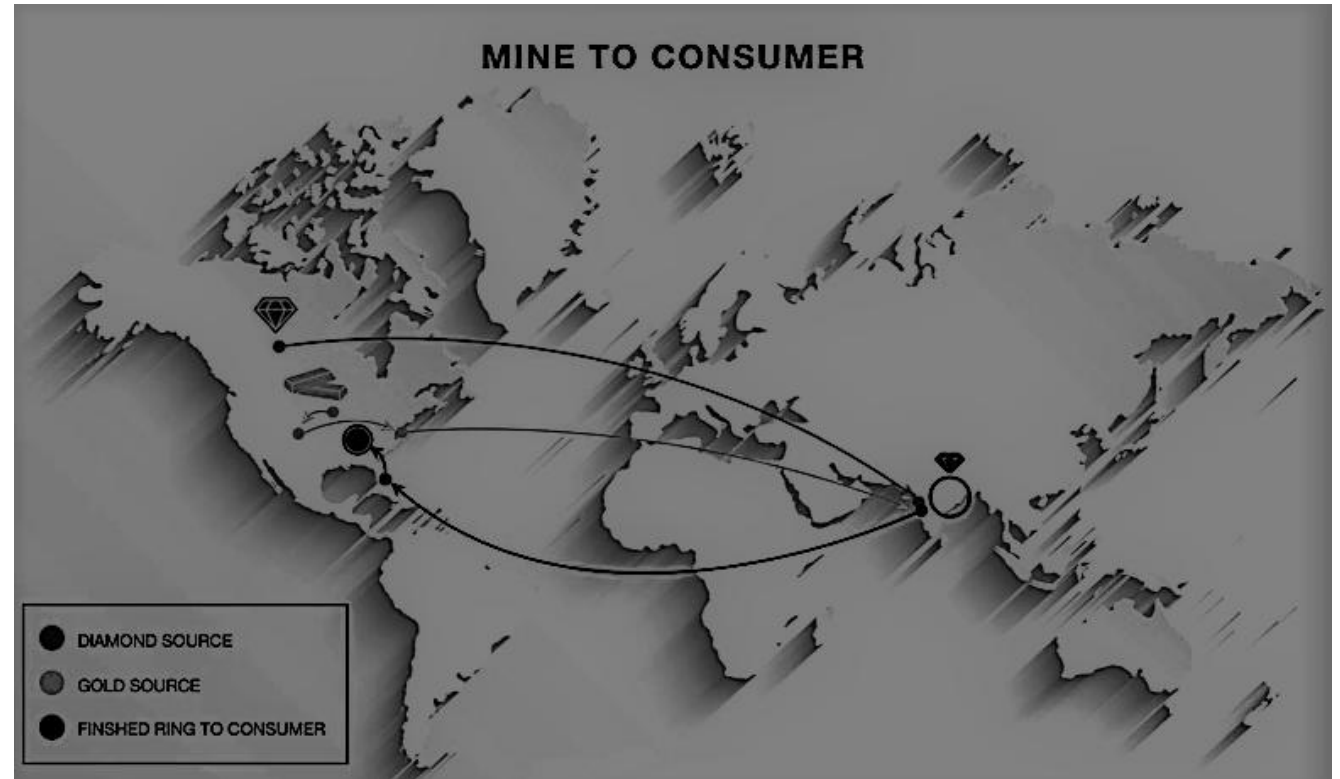
**London Metal Exchange to ban brands not responsibly sourced by 2022!**





This blockchain collaboration between The Richline Group and IBM will track and authenticate diamonds, precious metals and jewelry at all stages of the global supply chain, from the mine to the retailer.

This is a unique collaboration that leverages IBM's technology and the UL, independent third-party verification

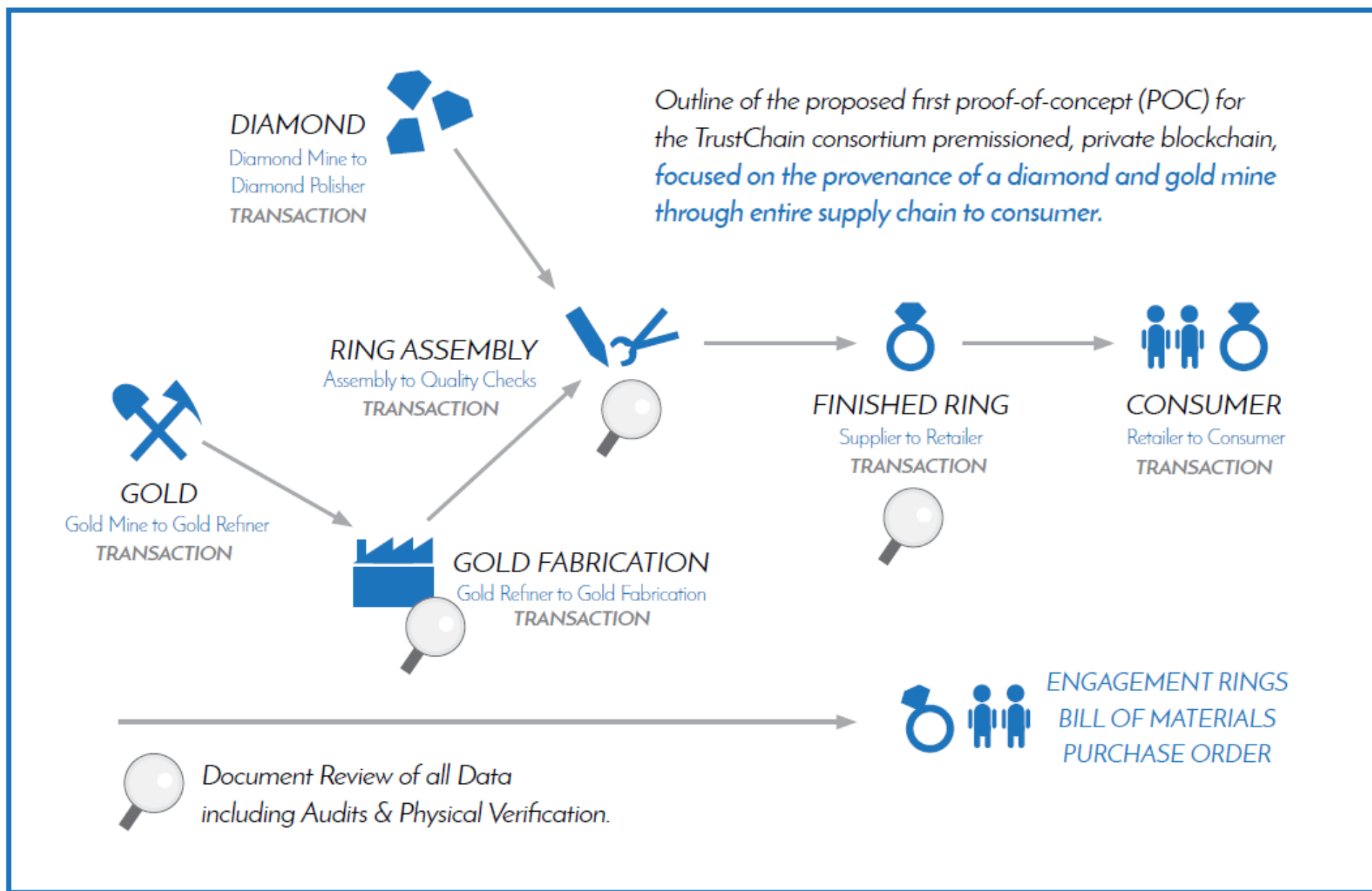


The TrustChain™ collaboration is well positioned to engage with the wider industry on a solution that will improve efficiency in managing the movement and provenance of diamonds and precious metals.

# TRUSTCHAIN: HOW IT WORKS

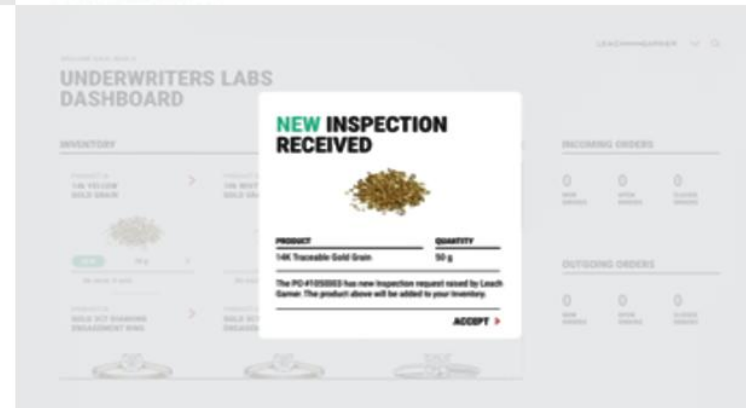
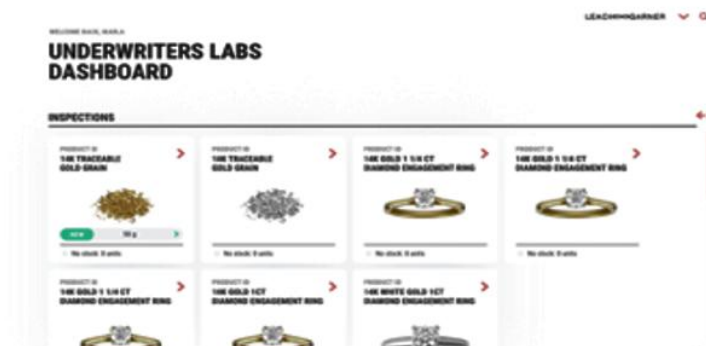
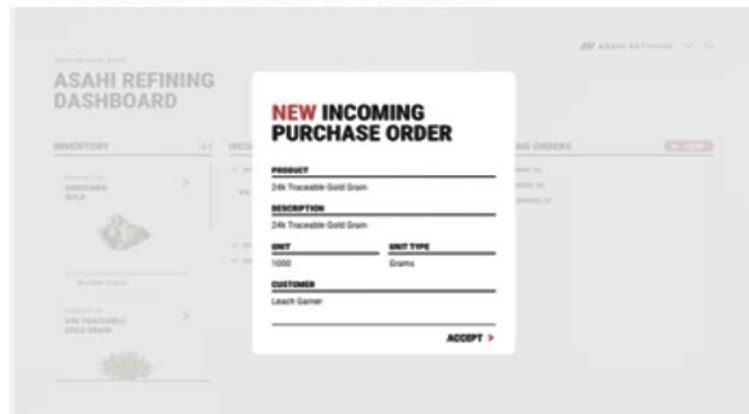
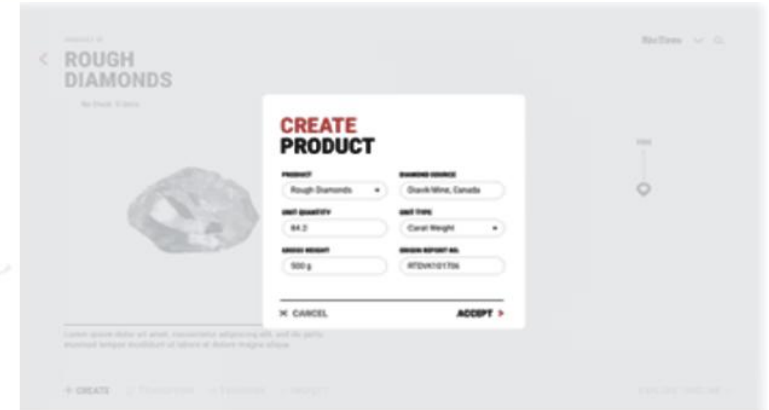
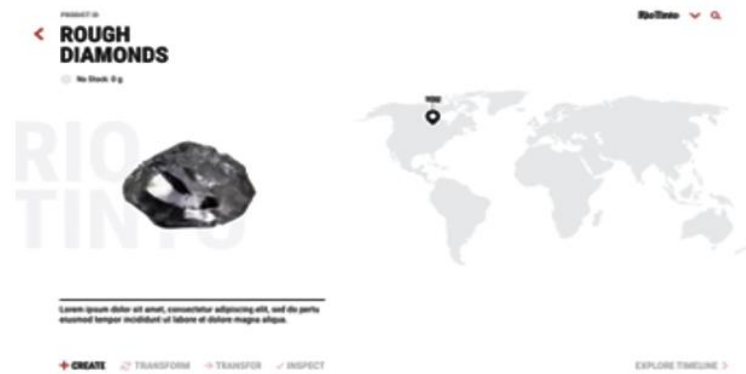
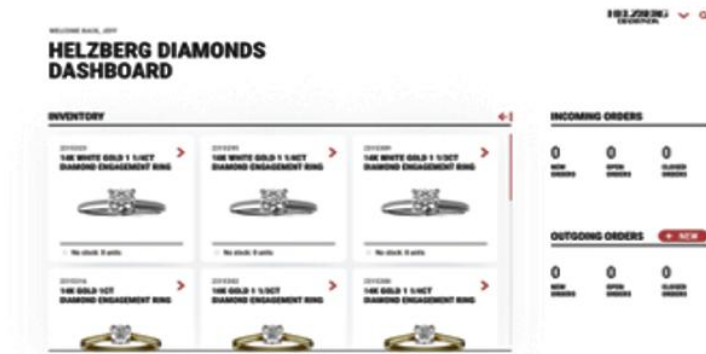


TRUSTCHAIN™





# Private, Permissioned Tracked and Transparent



# TECHNOLOGY: The Responsible Gold Supply Chain Application provides immutable records of gold' provenance and automates transfer of custody

For the first time, jewelers can access certified conflict-free, responsibly sourced gold with irrefutable assurance of provenance



Miners attach tamper-proof cryptographic seals to doré containers, register assets onto the blockchain and transfer custody to their logistics provider.



Security personnel accept physical custody of the doré and scan the cryptoseals with a mobile device. The change in custody is immutably recorded on the blockchain.



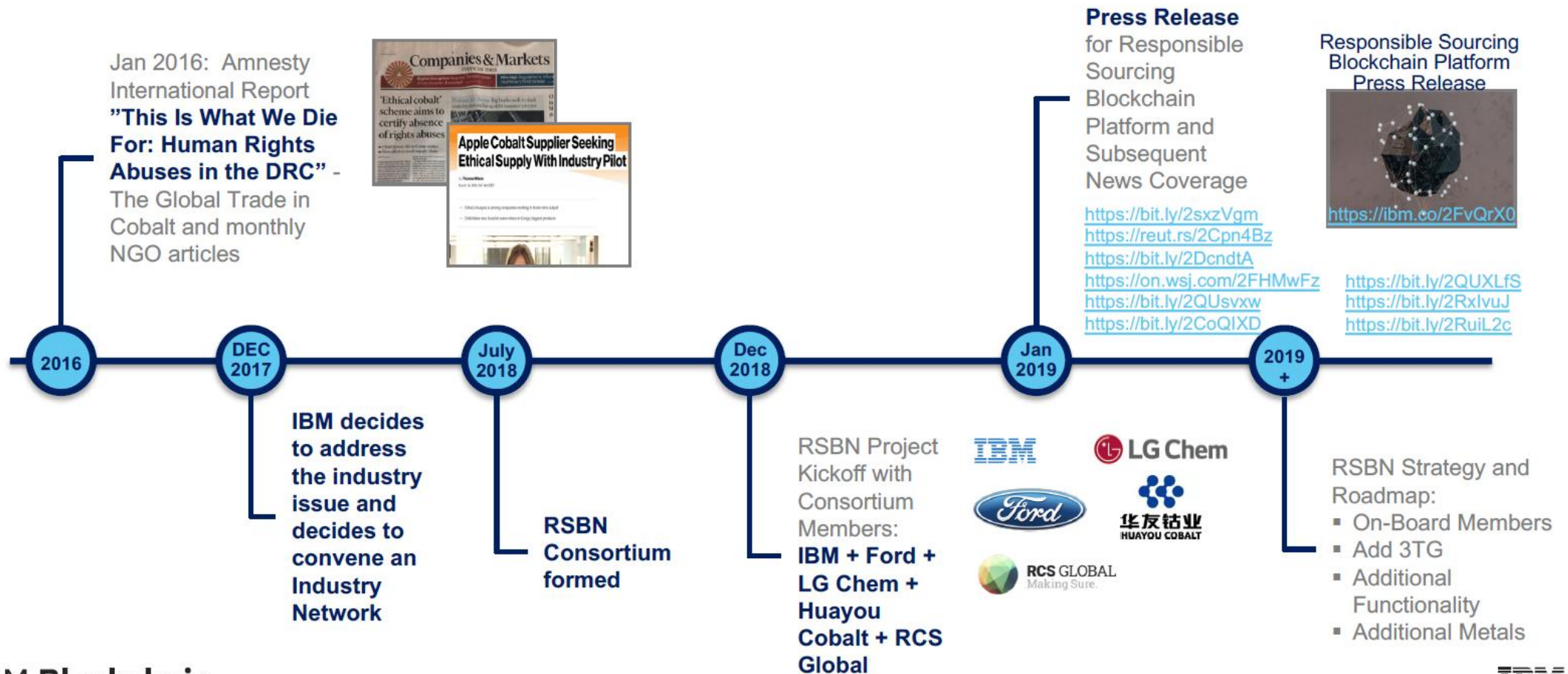
The refinery scans the cryptoseals to record another immutable custody transfer. Doré is transformed into 99.99% Responsible Gold products and registered onto the blockchain.



Responsible Gold products, including kilobars, large bars, and grain are shipped to a vault or fabricator to meet demand.

# RSBN JOURNEY

## From Market Imperatives to Pilot Execution





# RSBN – Consortium Ecosystem

## Future Use Cases

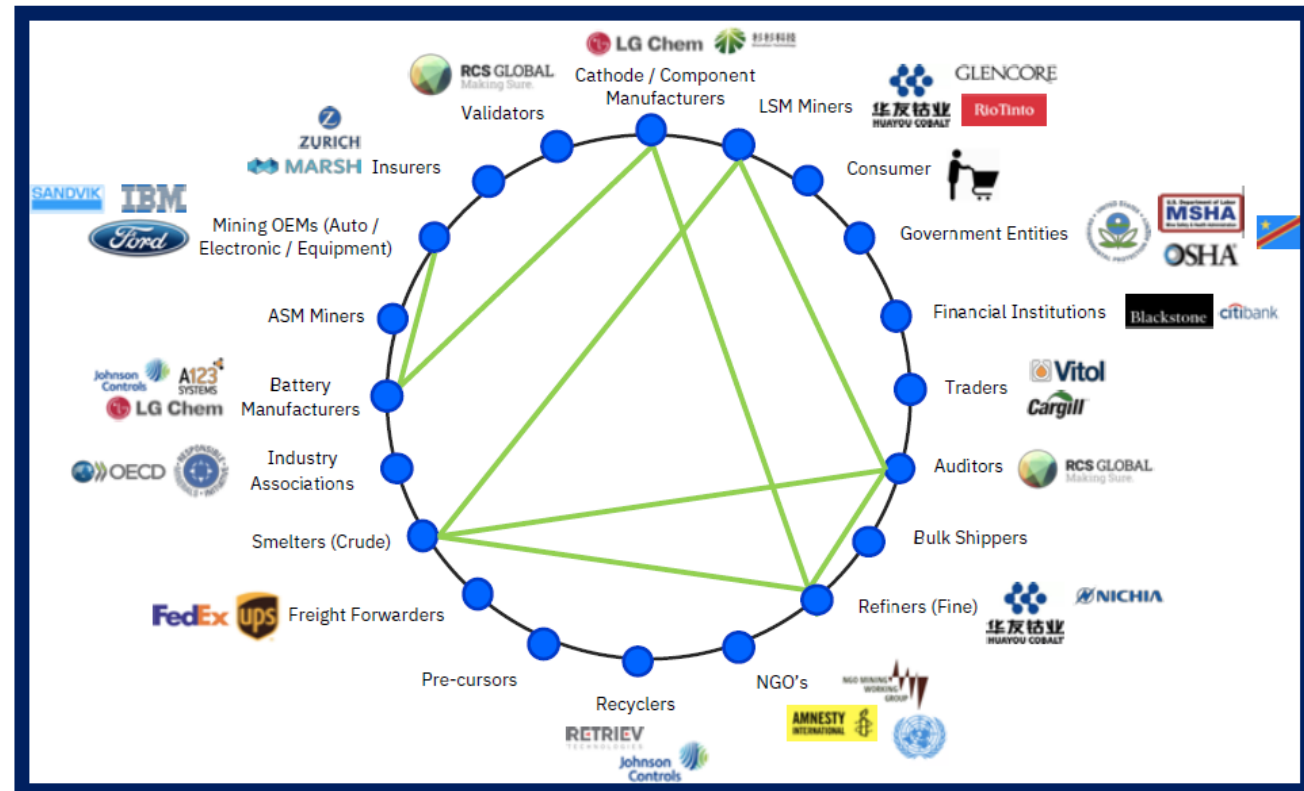
During our future state storyboarding session, we developed key opportunities for our network and future use cases:

- Become the go-to mining supply chain platform for a variety of minerals (e.g. 3TG) eventually gain the critical masse to transform the current ecosystem and processes
- Mitigate and eliminate mining environmental and labor violations to benefit all parties involved in the process, including the local mining communities
- Create a marketplace for different mining “apps” and establish a tokenization model that provides incentives and credits to supply chain participants that work in unstable and/or emerging economies

**IBM Blockchain**

## Consortium Ecosystem

The possibilities are endless as our Responsible Sourcing Blockchain Network expands to new users and members in the mining supply chain ecosystem:

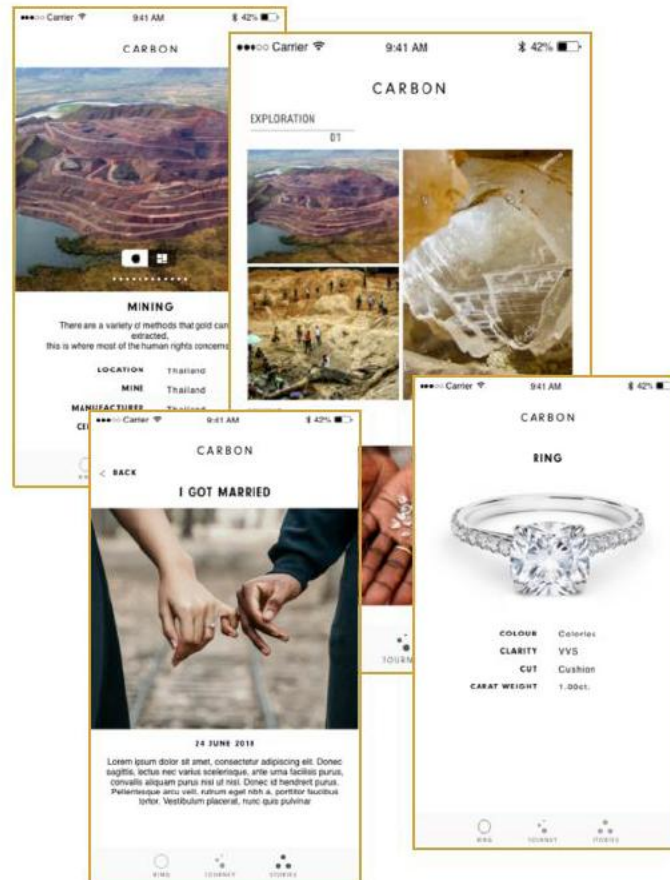




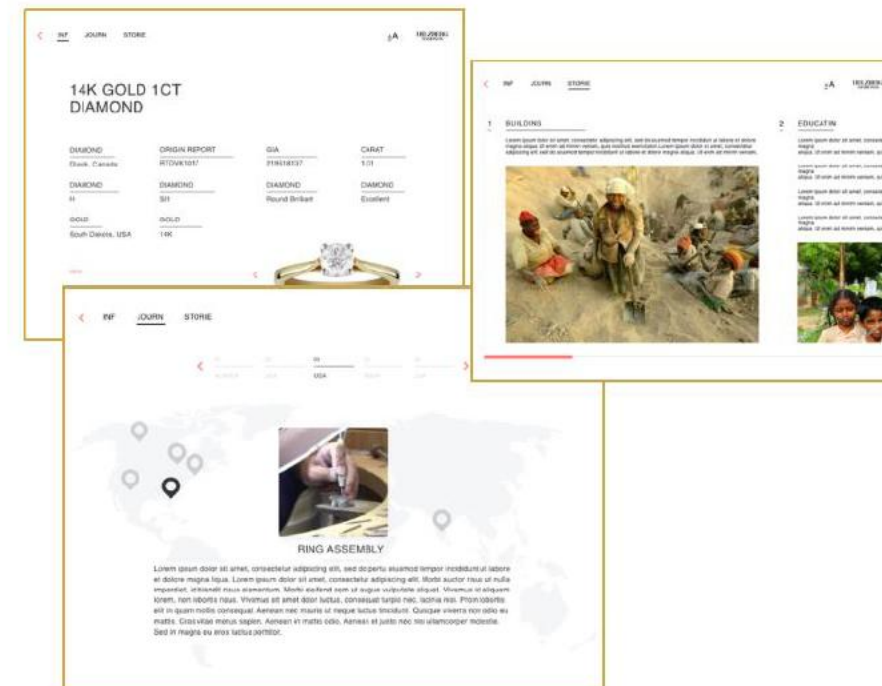
# TrustChain: “Verified by blockchain”

## Development of Marketing Concepts

INITIAL PROOF-OF-CONCEPT



## Focusing on in-store concepts



# Development of Marketing concepts

In conjunction with the core focus of the initial POC, we have explored potential consumer experiences that could be developed to demonstrate the provenance and authenticity of jewelry.

Consumer experiences have been grouped into 5 categories:

- Telling to story of the product, now and in the future
- The shopping experience
- Insuring the ring
- Upgrading the ring
- Selling the ring

## The Conscious Consumer

**44% | 68%**

RESPONDENTS STATED THEY WOULD  
**CHOOSE OR SWITCH**  
TO ECO OR SOCIALLY-RESPONSIBLE GOODS

RESPONDENTS STATED THAT THEY WERE  
WILLING TO PAY MORE  
FOR SUSTAINABLE GOODS

The concept work has focused on developing an example of a [consumer experience relating to telling the story of the ring from mine to retailer](#), and letting the individual record the story of the ring once they've received it.



## OUR RESEARCH

Surveying over 500 peers at Wharton helped us to understand further that the young generation represented opportunities to the diamond industry especially in three areas:

- their passion for online digital retail experience,
- deep concern over the jewelry's origins
- a paramount focus on individuality.

What we found very interesting and consistent with what TrustChain™ is trying to deliver is that millennials are not only set to be the largest consumption power by 2020 but **also are willing to pay a premium for authenticity, individuality, and self-expression.**

TrustChain™ can bring unique value, especially to those young generations to not only validate the authenticity of jewelry but help them memorably express their stories.

### The Respondent



65%

ALUMNI



Age 25-34

>\$100k

Annual household income

93%

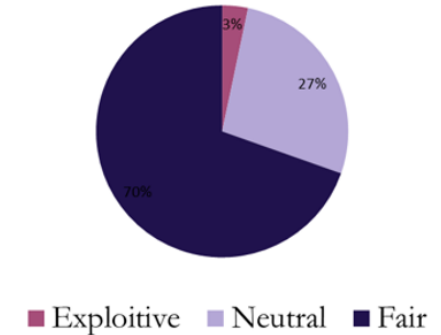
*of respondents  
trust the initiative*

- Affluent
- Likely to purchase Gold jewelry in the next 6 months

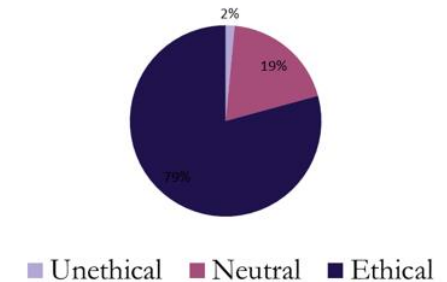
# IS TRUSTCHAIN™ TRUSTWORTHY?

One adjustment we plan to make for our survey is [to qualify the ethically-conscious respondents by incorporating an ethically minded consumer behavior \(EMCB\) scale](#). EMCB scores exemplify consumers consideration of ethics when making purchasing decisions. The important test will be a demonstration of the additional level of verification that the blockchain backbone can provide and measurement of the impact it has on perceived trust towards the product traced from the source.

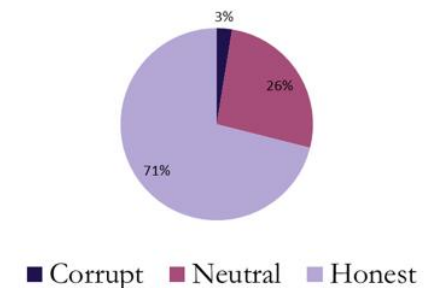
## How Fair is Trustchain™?



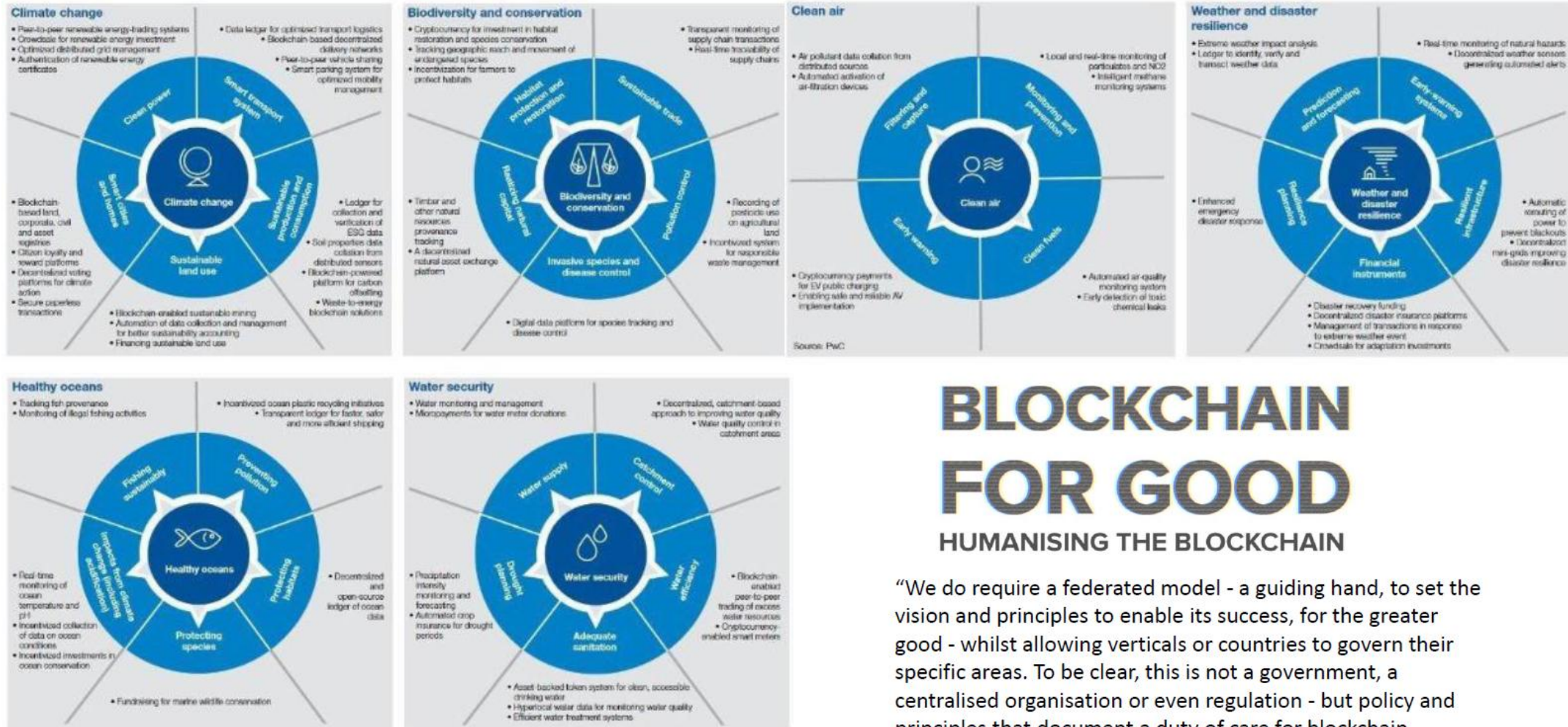
## How Ethical is Trustchain™?



## How Honest is Trustchain™?



# Blockchain applications by challenge area



## BLOCKCHAIN FOR GOOD

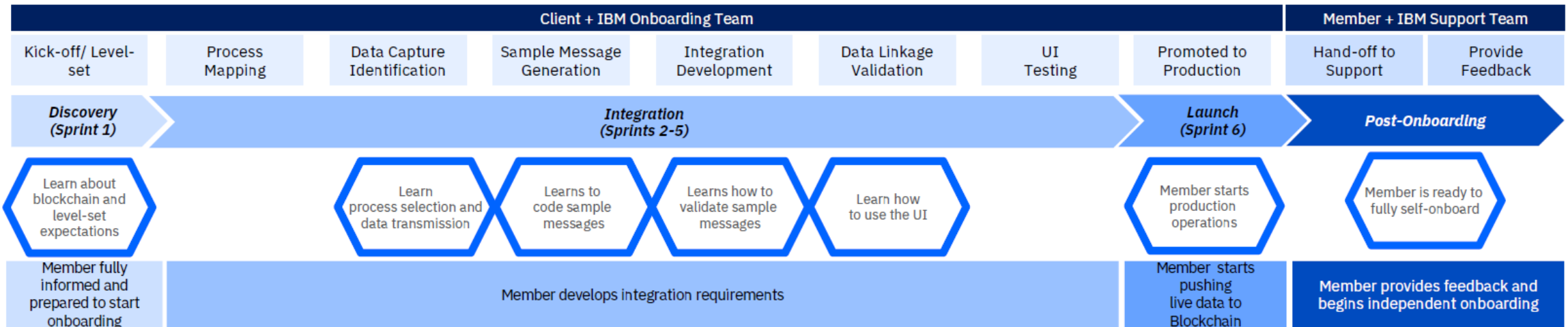
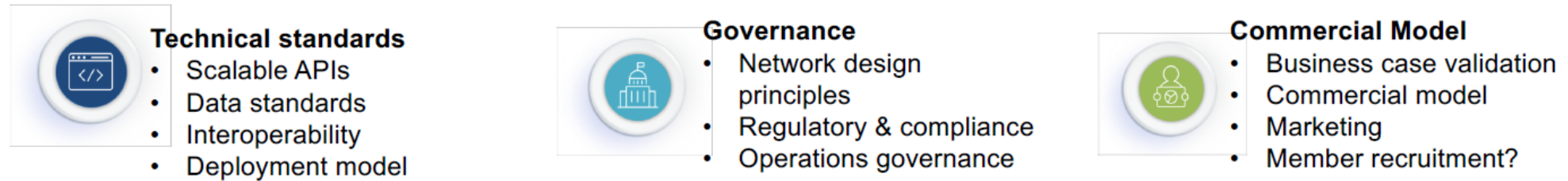
### HUMANISING THE BLOCKCHAIN

“We do require a federated model - a guiding hand, to set the vision and principles to enable its success, for the greater good - whilst allowing verticals or countries to govern their specific areas. To be clear, this is not a government, a centralised organisation or even regulation - but policy and principles that document a duty of care for blockchain technology.”

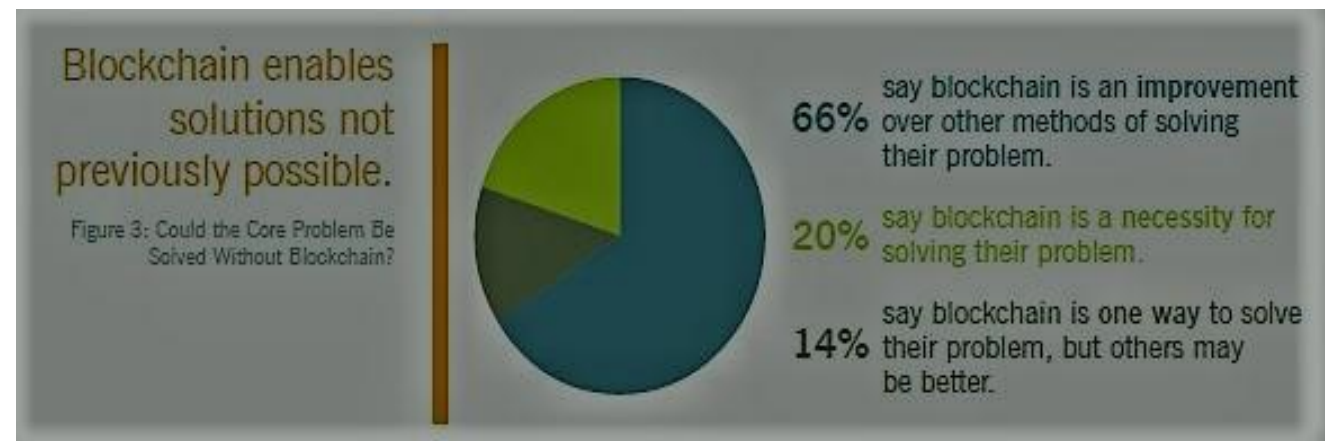
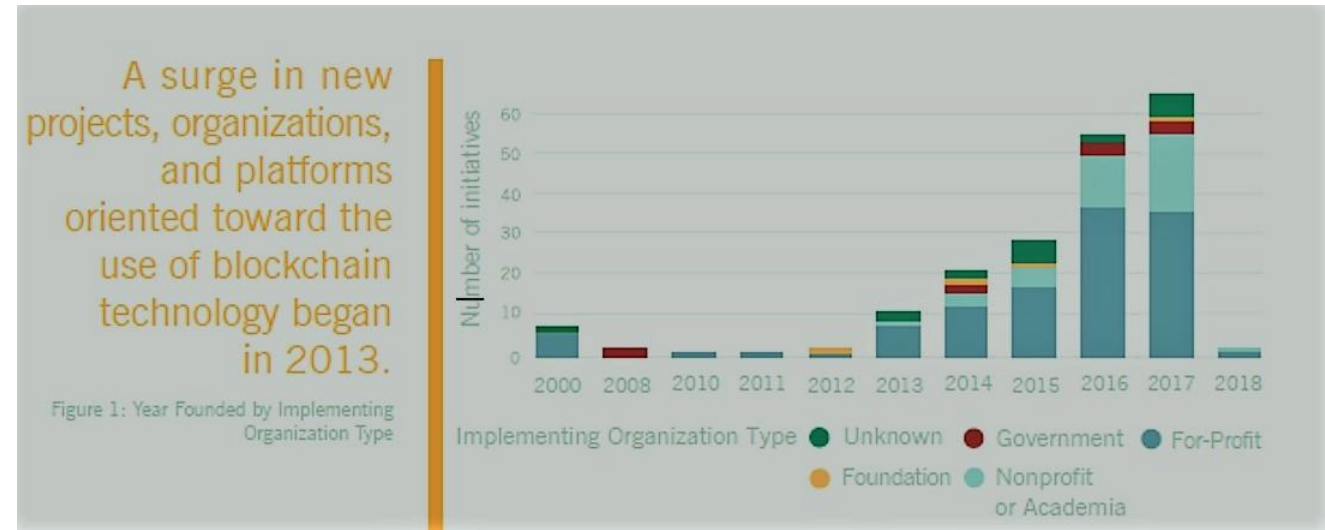
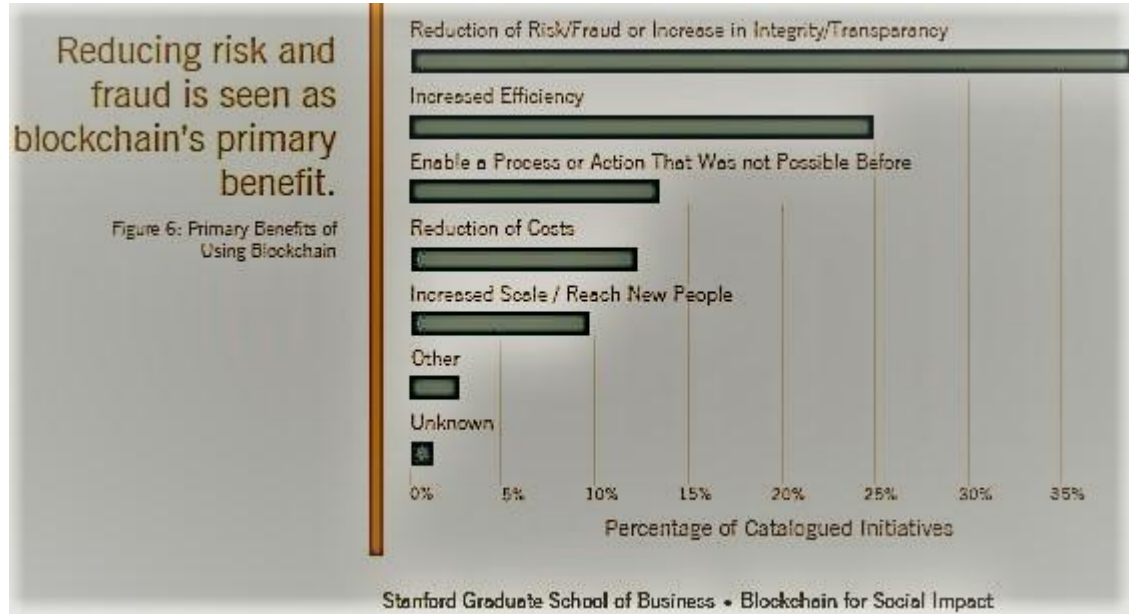


# Blockchain™ On-Boarding Methodology

Powered by technology standards, strong governance and attractive commercial terms, we will deploy our proven on-boarding methodology to shorten time to value for network participants.



# Why Blockchain™?



# *Thank you!*

**RICHLINE** >>  
RESPONSIBLE



**TRUSTCHAIN™**

**RG** **RICHLINE GROUP**  
A BERKSHIRE HATHAWAY COMPANY

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