



# Panopticon

## A Cuatrecasas solution

March 11, 2018



# PANOPTICON

*Enhancing cross-border supply chain compliance  
with blockchain and smart contracts*

Please click on this [link](#) for further  
information about this project

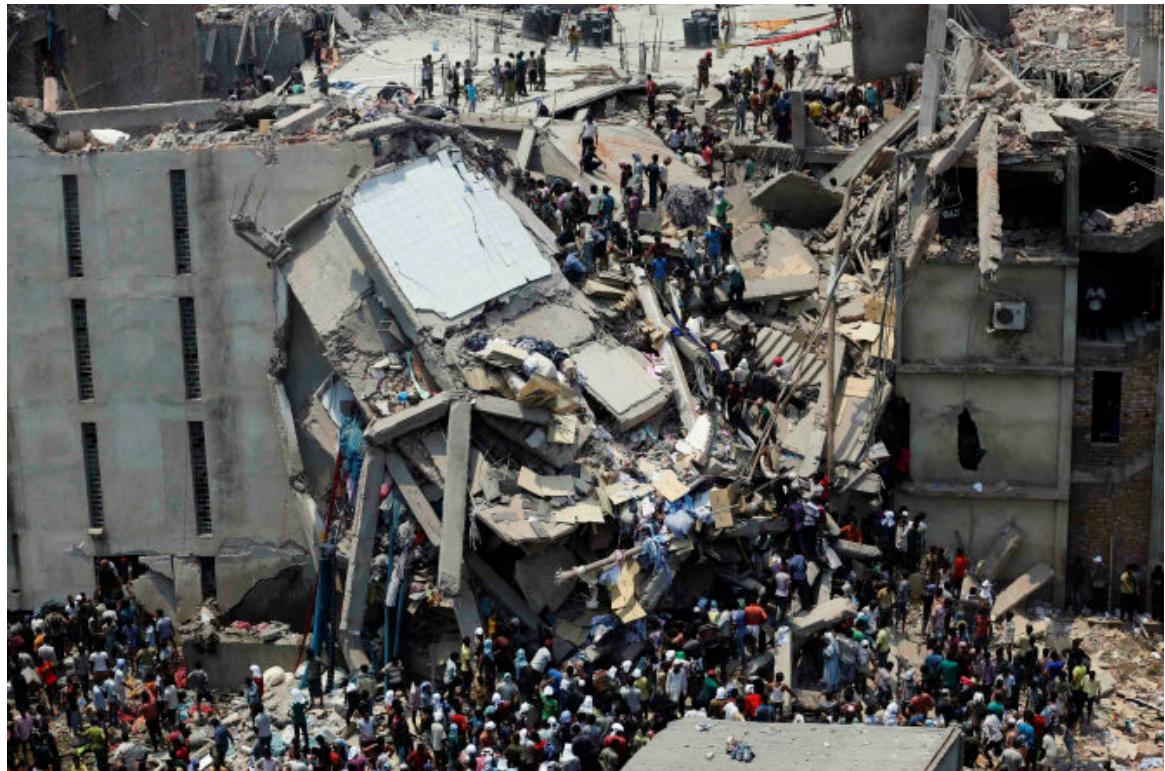
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## THE PROBLEM

- › Breach of labor standards along the supply chain:
- › In 2013, the Rana Plaza, a garment factory, in Dhaka, Bangladesh, collapsed
  - › 1.127 died
  - › 2.437 injured
- › Almost all multinational were producing at the Rana Plaza, some even without knowing





# WHY COMPANIES SHOULD CARE ABOUT THIS

## REPUTATION

- The public is becoming more and more sensitive to this subjects
- Technology will allow consumers to trace supply chain and know about infringements
- Boycott campaigns against companies with human rights infringements along their supply chain
- The public is more conscious than ever about consuming responsibly
- Sustainability strategies within companies do not match well with lack of employment standards

## REGULATION

- International:
  - Abolition of Forced Labor Convention (ILO)
  - UN Global Compact
  - Ruggie Principles
  - OECD
- EU Directive 95/2014
- National
  - California: Transparency in Supply Chain Act
  - UK: Modern Slavery Act
  - France: Law on the Duty of care of Parent Companies

## INVESTORS

- The DOW Jones Sustainability Index (DJSI) requires companies to control and trace their supply chains and their conditions down to the third tier
- BlackRock's CEO stated in its annual letter to invested companies that one of the main investment criteria of the group for 2018 and 2019 would be human capital management, particularly health and safety issues, labor relations and supply chain labor standards



# CURRENT SULUTION: AUDITING SYSTEMS

## INTERNAL AUDITS

Internal or local audits are very expensive and not objective. Since the audit system is supposed to be a mechanism through which an auditor makes unannounced factory inspections, the need to rely on local auditing entities based in countries with high corruption levels makes it very difficult to ascertain the reality inside those factories

## EXTERNAL AUDITS

Foreign auditors are easily recognizable in the town where the factory is located. Therefore, factory managers quickly hide any signs of breach of contract obligations, dismiss workers who do not have the minimum required age, and falsify or hide records of misconduct. Said auditors lack the cultural background and local connections needed to discover, investigate, and punish misconduct

## NGOs

NGOs that live and work with the families of the factory workers report to the multinational companies all employment and human rights infringements they are aware of. In this case, the challenge faced by the multinationals is twofold: the heterogeneity of these organizations makes it complicated to know who to trust; and their geographical reach is not worldwide, so it would be necessary to have an organization in each town where each factory is located

## UNIONS

Unions normally do not dispose of enough legal protection in those countries where there are most needed. Therefore, they normally fail in their task due to fear of being persecuted by the factory owners



## CURRENT SULUTION: AUDITING SYSTEMS



Clients



HHRR & labour  
standards clauses



xxxxx



Inneficient  
audit system



Costly



Not 24/7



Unreliable

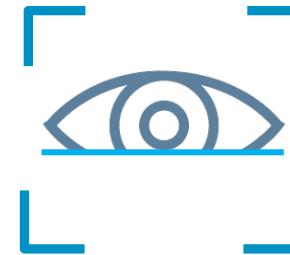
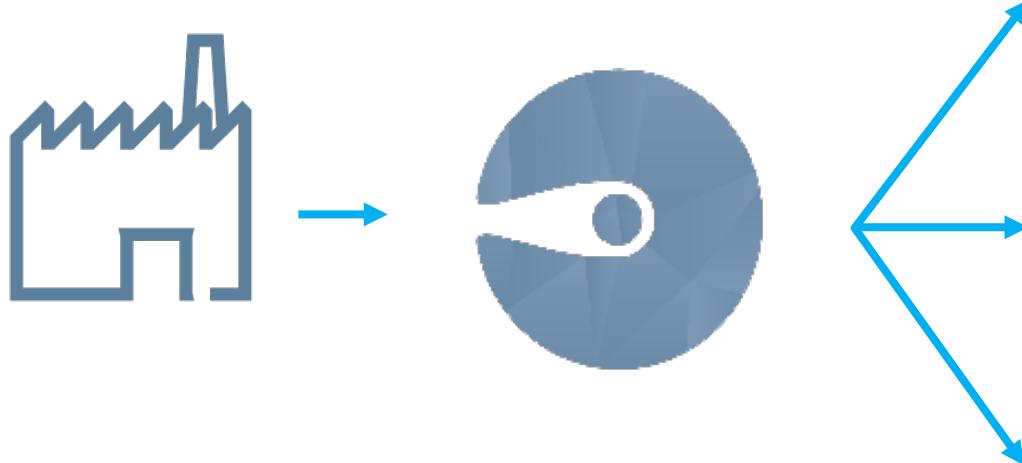




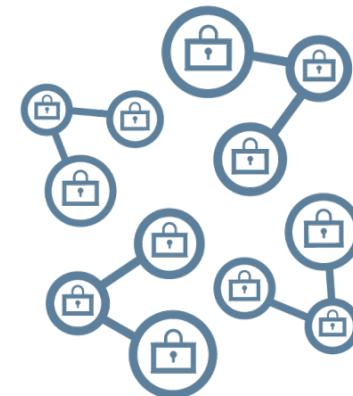
# PANOPTICON

## ENHANCING CROSS-BORDER SUPPLY CHAIN COMPLIANCE WITH BLOCKCHAIN AND SMART CONTRACTS

### HOW DOES IT WORK?



On site sensors



Blockchain



Smart contracts



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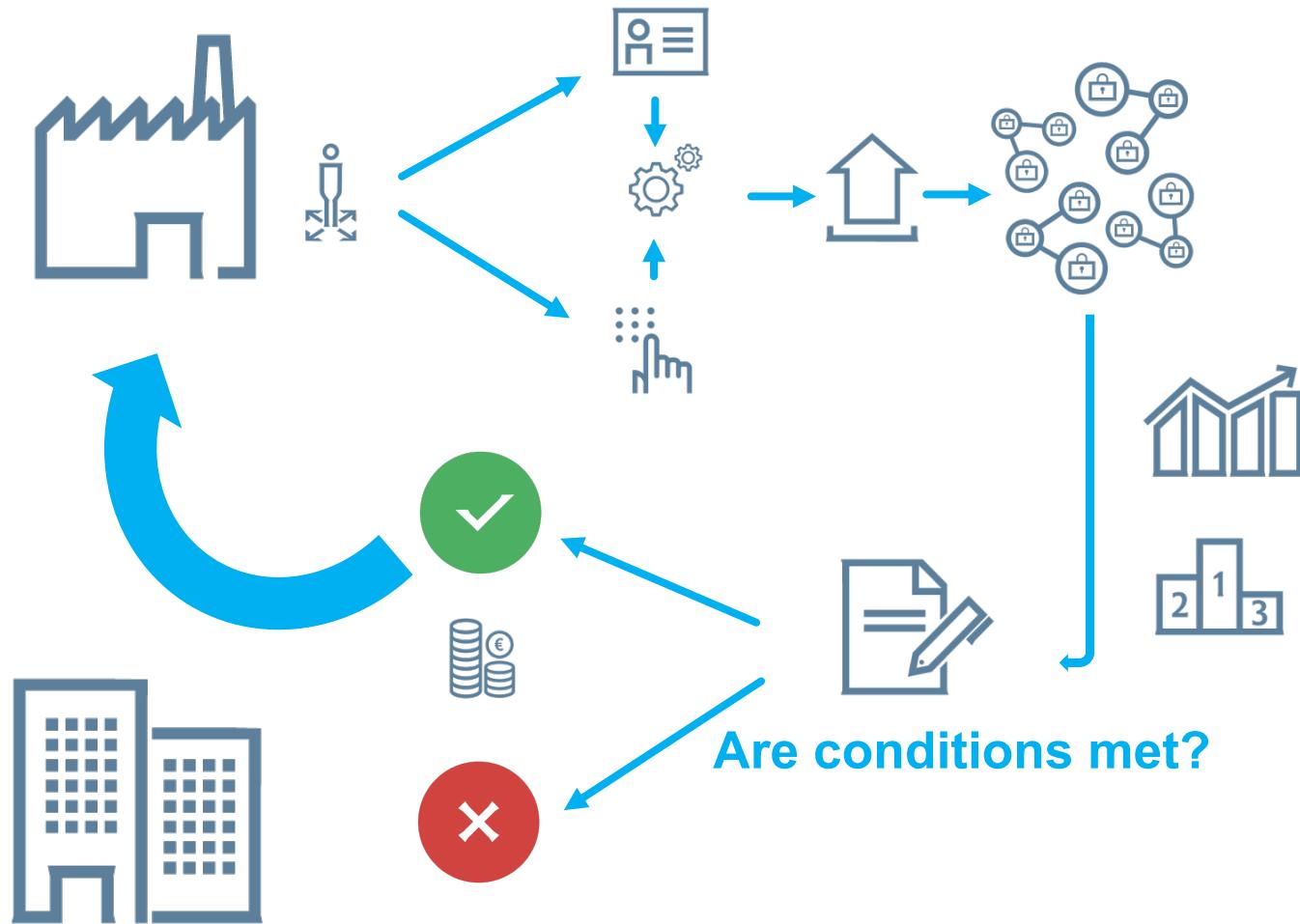
## HOW DOES IT WORK?

- 
- ON SITE DEVICES**
    - The type of on-site devices will depend on the employment standards clients want to monitor and control. The more data, the more accurate the system is. The non-employability of minors at the factory is the labor condition that will be measured in our MVP. It requires face or fingerprint recognition or other biometric systems to identify workers at check-in and check-out. The installation cost of cameras and fingerprint scans is relatively cheap. Health conditions in contractors' facilities is another example of data that can be easily monitored. A physical device that measures humidity and heat would make it possible to know if employees are working in unhealthy conditions.
  - BLOCKCHAIN**
    - Sole multinational as client: Ethereum Enterprise blockchain together with Quorum, the JP Morgan protocol for Ethereum Enterprise and IBFT consensus. A semi-public blockchain would allow Panopticon to have the benefit of traceability and public control, but also the advantage of big transaction capacity thanks to the existence of validating nodes and IBFT instead of a Proof of Work mechanism.
    - Industry consortium as client: IBM Hyperledger Fabric. This blockchain allows the different companies to validate the transactions without making them public, together with a huge transaction capacity.
  - SMART CONTRACTS**
    - Smart contract allow for the automatic enforceability of payments to contractors and suppliers if said parties comply with the labor conditions and human rights requirements agreed in the contract. The smart contract will be coded to automatically-autonomously-and-instantly execute their clauses, either to release payment if the established conditions are met, or to withhold it when there is a breach. The infringements registered in the blockchain will be linked to a specific contractor or supplier and to its factory where the infringement took place. Payment to the contractor or supplier will occur to a smart contract at a set date.



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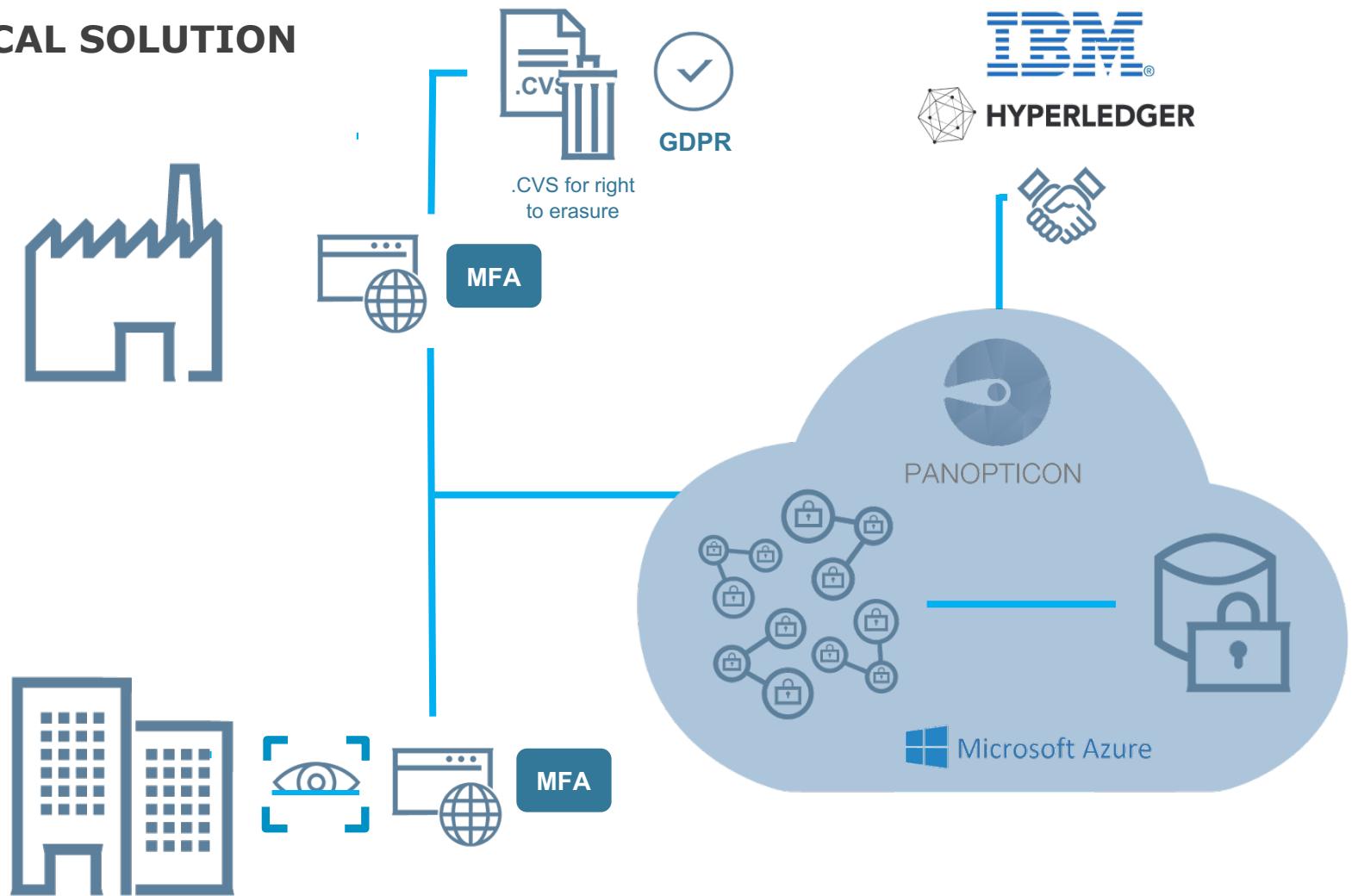
## FUNCTIONAL DESCRIPTION





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## TECHNICAL SOLUTION





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## DATA PROTECTION



### Protocol

Management of security infringements



### Protocol

Impact evaluation



### Training Program

DPO training



# GDPR

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Information clauses to workers



## BUSINESS MODEL

- › **Future revenues: Platform-as-a-Service (PaaS).** Subscription model.
  - ❖ The premium option will provide all resources, including advanced reporting.
- › **Costs:** the initial technological investment for the initial service infrastructure could be covered with the team's investments. The cost of the network equipment for each factory could be covered with fixed payments from multinationals for the integrated service.
- › **Human resources:** our multidisciplinary team can define and execute the platform's configuration and address the legal complexity of the project, with Cuatrecasas' support.
- › Our project has **great scalability** in many sectors.
  - ❖ Almost three-quarters of organizations have reported having business continuity arrangements related to supply chain management (*Business Continuity Institute*).



## COMPETITORS

- › Our solution has no competitors in the market at the moment.
- › *Auditchain* is developing a decentralized continuous audit and reporting protocol ecosystem. However, this solution does not focus on helping companies comply with employment standards and human rights in cross-border supply chains. In this regard, we are specifically focusing on labor conditions in supply chain management, which, to date, has no competition. This means we have a real competitive advantage to introduce our solution to the market and to integrate our solution easily in the companies' systems.
- › For more information visit <https://auditchain.com/>



The age of  
corporate fraud  
is over.

#auditchain



## PRODUCT VALIDATION

*"When the Panopticon Team introduced me to their idea, I thought that it could fit perfectly as a feasible solution of our concerns towards enhancing living conditions and improving transparency. As a telecommunications company we are especially interested in solutions that use innovative connectivity technology, such as IoT or blockchain"*

- Director at a global telecomm

*"Panopticon is a great project to measure and record data on parameters that define the employees working conditions. Applying technologies such as Blockchain and IoT may reduce the cost of large companies when it comes to controlling the conditions of employees working in the factories. It is fascinating that law firms like Cuatrecasas lead and get involved in projects like this to create a positive impact because we cannot keep turning our back on a problem of this magnitude"*

- Talent manager at a top talent platform

*"In efforts of making supply chains more sustainable, retailers are facing the challenge of obtaining full transparency and traceability within their supply chains without sacrifice in scalability and flexibility. Here is where Panopticon steps in. Panopticon is developing an auditing system helping retailers to obtain greater transparency and traceability throughout their supply chain by bringing IoT, smart contracting and blockchain together. Hereby Panopticon is contributing to efforts of better working conditions and living standards throughout the world"*

- Strategy consultant at a textile multinational

*"It is already well known that blockchain technology combined with IoT has the potential to be a game changer for the supply chain industry. Panopticon is tackling an obvious but still not confronted problem: labour conditions, which not only benefits companies by reducing audit costs, increasing transparency, improving control on suppliers and protecting the companies' reputation but more importantly it helps protecting human rights and working conditions"*

- Blockchain project manager at a global financial institutions

*"Panopticon may help improve human rights and employment standards through technology, wherever a traceable supply chain exists"*

- Risk advisor at a textile multinational



## TEAM MEMBERS

### Lawyers



José  
Izquierdo



Paula  
González



Pedro  
Mendez de Vigo



Andrea  
Ortega

### IT



Sergio  
Juárez



Nabil  
El Alami



César  
Martín



Dirk  
Hornung