

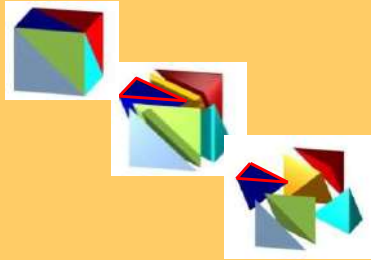


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**Το μέλλον του Ελέγχου του έργου.  
Μια πρόκληση για σκέψη.  
The Future of Project Controls.  
Challenging your thinking.**

**Dr Dimitris Antoniadis of DAnton ProgM  
February-2023**



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# About Dimitris



Dr Dimitris Antoniadis

Director of *DANTON PROGM* consultancy; 35+ years in Programme and Project Management.  
Course Leader of the Project Control BSc Degree in the UWL/LMC partnership.

Author of the book '*Demystifying Project Control*', as well as a number of chapters and articles on Complexity in Project Management, Leadership, etc.

Worked for various organisations such as: *BAA*, *Southern Water*, *Thames Water*, *Balfour Beatty*, *Brown & Root* (in Egnatia Odos programme of works), *Turner & Townsend*, *Carillion*, *UK Power Networks*.

And in various roles: *Programme Manager*, *Head of PMO*, *Project Manager*, *Head of Project Control*.

Academic Qualifications: *PhD*, *MSc in Project Management* and *BEng (1<sup>st</sup>) Mechanical Engineering*

Fellow of the Association for Project Management and Fellow of the Chartered Management Institute



# About Dimitris



- Worked with a group of major Companies and carried out a Proof of Concept on the process flow of Placing Orders using **Blockchain** and further implementation of the technology in Project Management / PMO.
- Currently working with a group of Companies on the use of **ML / AI** in Project Management.
- Researching the use of **Neural Networks** (NNs) in project control and in particular '[How do we improve Scheduling](#)' and where NNs can augment / strengthen the process.
- Working on the process '**Data – Information – Knowledge**' and how this compares to the Supply & Demand curve.



# Discussion Content



- What are the issues / generic challenges?
- What technologies are there and their effect?
- Use of technology – [case study blockchain](#) – in Project Control / Mngt.
- The future and its challenges.

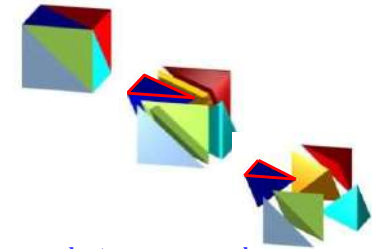


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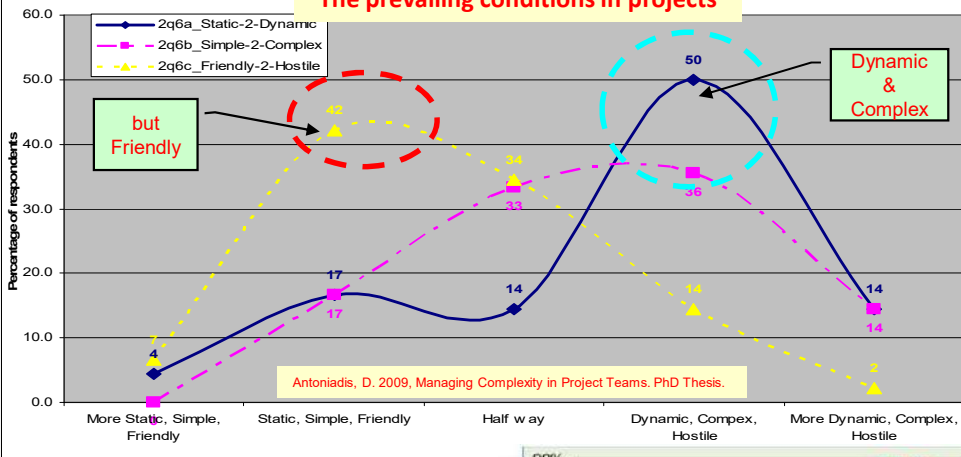
# The current status and the challenges

# Issues / Challenges

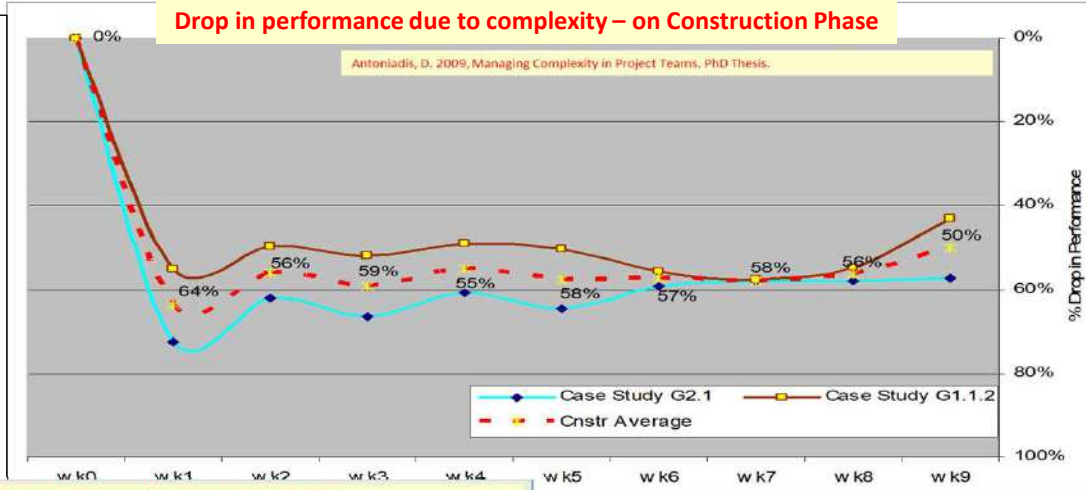


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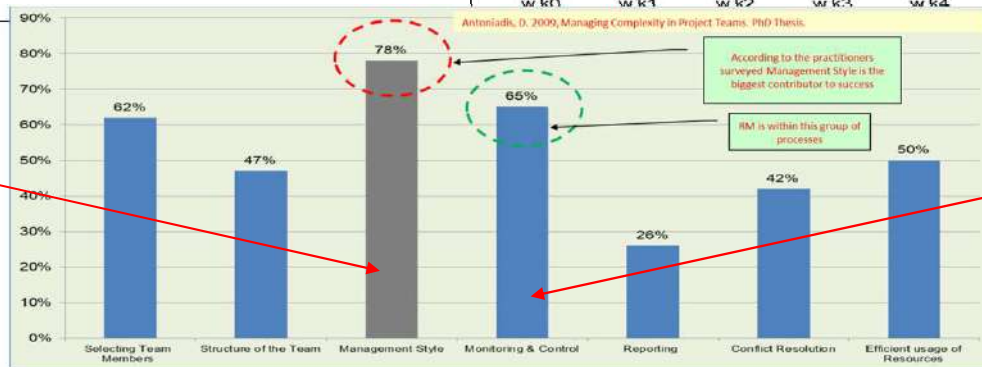
The prevailing conditions in projects



Drop in performance due to complexity – on Construction Phase



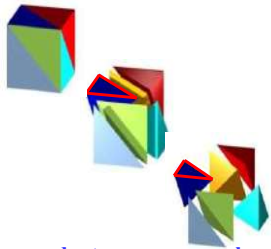
Management Style



Monitoring & Control

Contribution of project management sub-processes to the success of the quality of the project management for levels – Substantial to Excellent

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# The generic challenges



## APM Projecting the Future – 4IR & PM4.0



[https://www.apm.org.uk/projecting-the-future/fourth-industrial-revolution/?utm\\_source=Projecting%20the%20future&utm\\_medium=Email&utm\\_campaign=Artificial%20intelligence](https://www.apm.org.uk/projecting-the-future/fourth-industrial-revolution/?utm_source=Projecting%20the%20future&utm_medium=Email&utm_campaign=Artificial%20intelligence)

In Jan 2018 the World Economic Forum announced the birth of the **'Fourth Industrial Revolution' (4IR)**, an age of **rapid, continuous and momentous technological changes** .... the **potential of disruption is everywhere**.

[and this was 2 years before the disruption caused by Covid-19]





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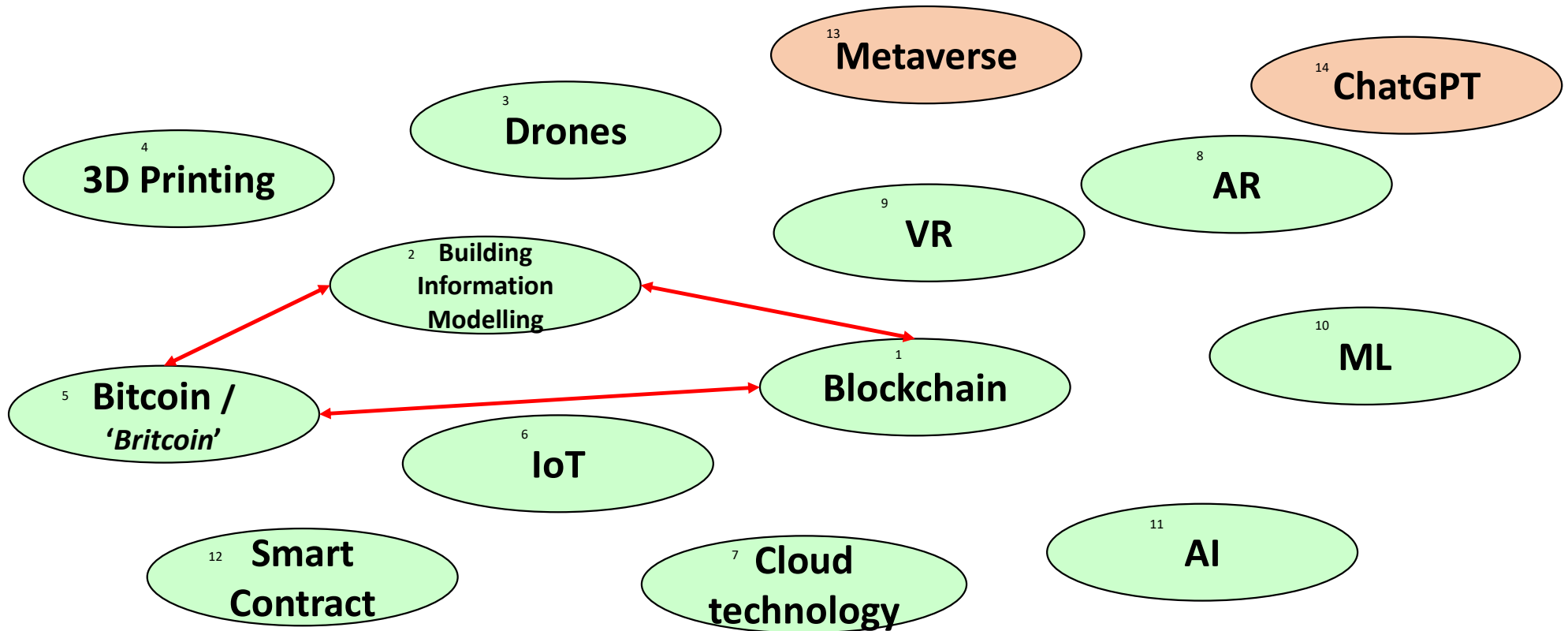
# What is happening on the technology side?

## Can technology help us stop projects failing?





# Technologies



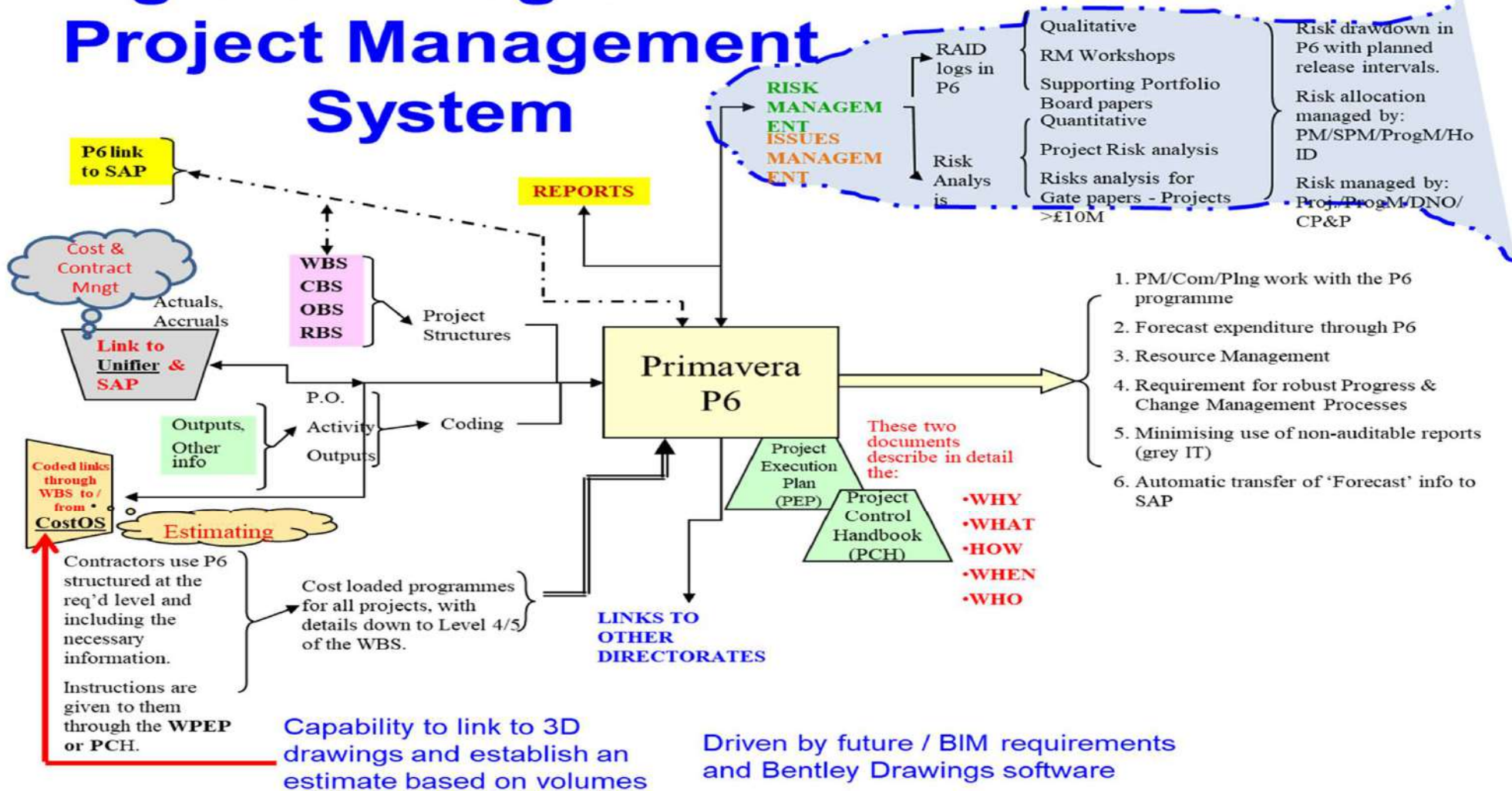


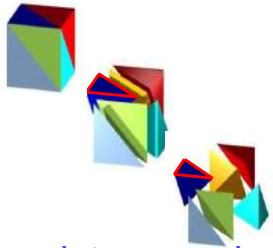
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# Case Study - Blockchain

## How can we use this technology?

# Integrated Programme & Project Management System





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# What is blockchain?



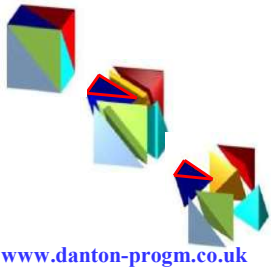
Individual blocks contain data that are time and date stamped, placing them in sequence. Cryptography ensures that the blocks / data cannot be copied or other data be inserted and brake the history of the chain.



Blocks have their own unique signature.

Each block validates independently all other blocks within the blockchain and when stored creates a ledger. (Blockchain is also referred to as Distributed Ledger Technology).

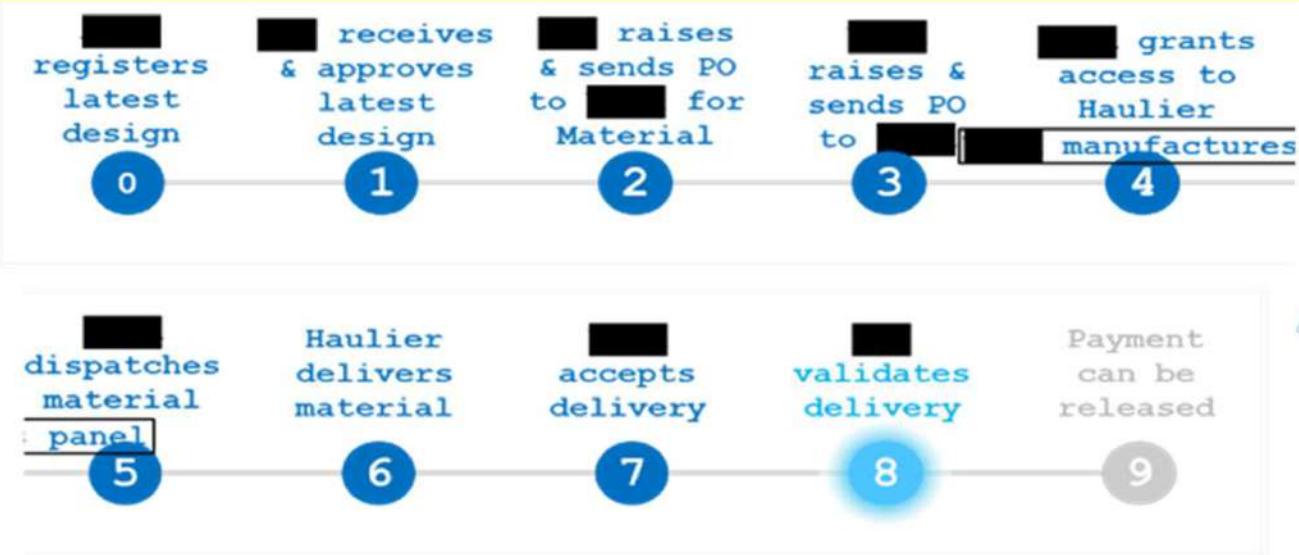
The blockchain is completely transparent and gives the full history of the data users are working with.



# PoC and some results - 1

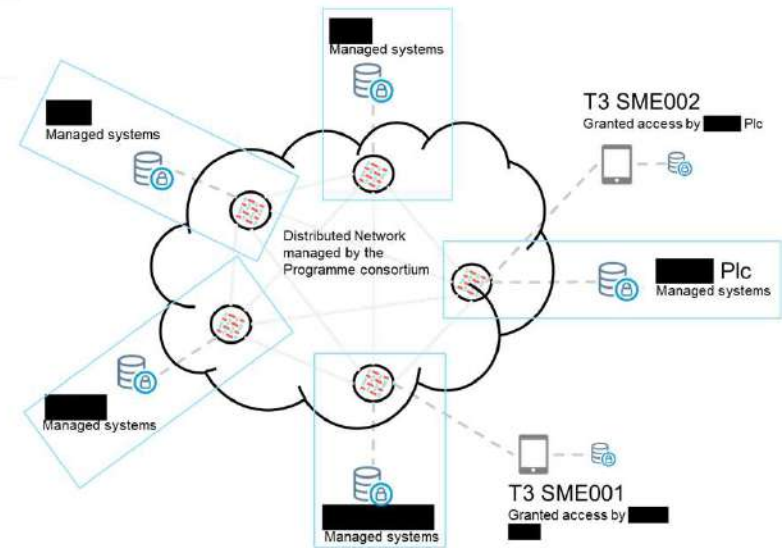


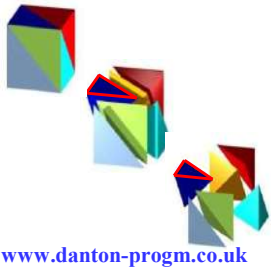
PoC steps for placing an order for delivering a fascia panel in one of the HS2 Rail stations



More details available in my article: [Blockchain Technology and Project Control](#)

## Blockchain architecture overview





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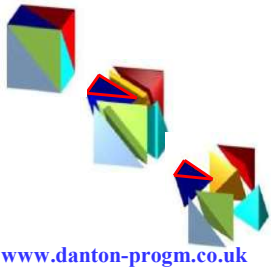
# PoC and some results - 2



## Measuring PoC Benefits

Benefit	Description	Issue Addressed	Success Criteria	Measure	Red	Amber	Green
1. Improving payment cycle to supply chain	Enables the improvement and prompt completion of the payment cycle to supply chain	The cycle of payment approval is slow	Reduction of time taken from raising an invoice to the actual payment	How long it takes for the submitted payment to be approved	>3d	<2-3d<	<2d
2. Enables live real time information	Information reviewed at any point in time represents the latest / real time status of the order / project	Current systems do not allow for real time information regarding the status of the order / project	At specific points in the process information is current	Status of order is within 8 hours of the latest stage	>8hrs	<4 - 8hrs<	<4hrs
3. Supports the process of Data and information 'survival' when supply chain businesses stop trading	Blockchain enables the storage and access of data / information even after the contractor has ceased trading	Data / information with entities that ceased to exist is not available	Data / information can be accessed by authorised parties at any stage	Accessibility of data / information about the order	No	N/A	Yes

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# Benefits and initiative drivers for blockchain technology



## Benefits of blockchain:

- Common standards – including the standard project management structures
- Automated workflow
- Adopting good practice throughout the programme delivery
- Use of Common Data Environment – enabling BIM
- Use of 'smart contract'
- Drives operational efficiencies, removing intermediaries, reducing admin effort and reconciliation of transactions.

## Where in Project Control / PMO should blockchain technology aim to contribute?

- Common structures / standards
- Smart contracts
  - Commercial processes
  - Procurement / supply chain
- Asset Management – digitisation of assets
- Monitoring and Control processes
- Design Management / BIM
- Reporting

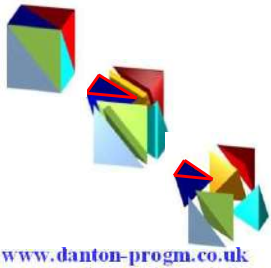


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# The future and its challenges





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# Further points



Mck Article February 2022

## News from the Global Infrastructure Initiative



**Tony Hansen**

Managing Director of the Global Infrastructure Initiative, McKinsey & Company

Welcome to the February 2022 edition of *Voices on Infrastructure*, which explores what it will take to successfully scale up the delivery of capital projects to meet net-zero targets.

Hitting those targets will require the largest capital reallocation in human history—it will mean annual clean-energy investments of \$9.2 trillion, which is \$3.5 trillion more than today.<sup>1</sup> Successfully delivering this massive increase in capital projects will necessitate new approaches to how we plan, develop, and construct projects, including better use of analytics and modern tools. Used strategically, analytics can provide the transparency and metrics to measure asset performance across the life

## Changing project delivery to meet net-zero targets

As construction increasingly adopts climate targets, owners and contractors can help change how projects are delivered. Doing so will likely require expert analytical and technical skills.



**Mark Reynolds**  
Group chairman and chief executive officer  
Mace Group



**Tony Hansen**  
Managing director  
Global Infrastructure Initiative  
McKinsey & Company

## Charting new approaches to capital project delivery

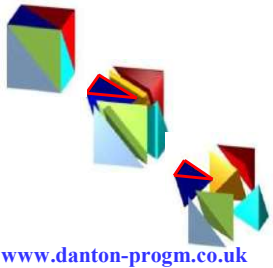
February 2022

**McKinsey:** What do you foresee being the biggest challenges or obstacles to achieving our net-zero aspirations?

**Mark Reynolds:** A lack of will to change. Every

is going to be less stable. Consequently, there will be a change in behaviors that projects will need to anticipate. We can't keep rebuilding

Using data is fundamental, though we must be clear about the targets and what is achievable. We can't reach our targets without knowing where we are. Data are implicit in making sure we're moving in the right direction as well as reinforcing the added value to maintain momentum. The industry needs a standard and



# Points to consider



How do you think Project Control will accommodate future trends?

How will the Greek project management profession implement Project Control and accommodate future trends?

What are the challenges we will face?



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DEMYSTIFYING  
PROJECT CONTROL



# Ευχαριστώ

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