

A pair of brass scales of justice is shown on a wooden surface. The scales are slightly tilted, with the right pan being lower than the left. A blue semi-transparent rectangular box is overlaid on the image, containing white text. The text reads: "Balancing Burdens of Proof in a Construction Project".

Balancing Burdens of Proof in a Construction Project

Why So Legal?



Overview

- Burdens of proof
- Balancing and rebalancing contracts
 - Balance
 - Contractual mechanics
 - Construction margins
 - Tipping the scale
- Non critical disruptions
- How to control non critical disruptions



Defining: Burden of Proof

The obligation to prove what is asserted and in dispute

Effectively controlled activities

=

Activities and events, for which proof
will be available, if a dispute arises

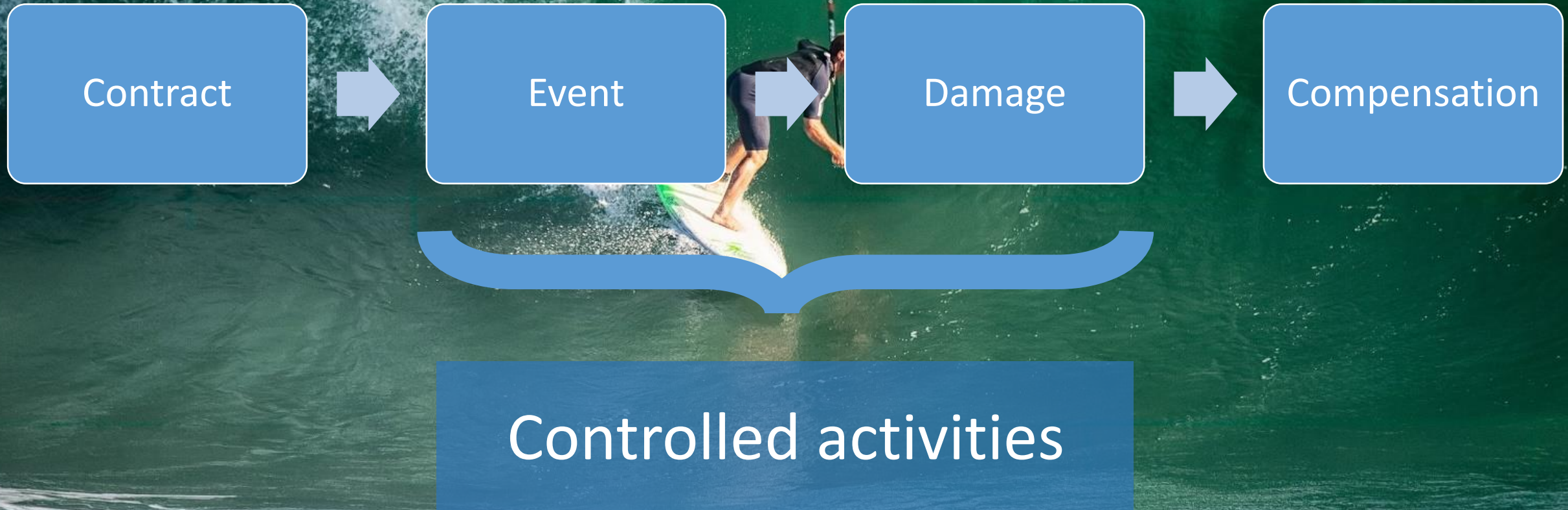
Keeping a contract
fair & balanced



Definition of Balance

- A situation in which different elements are equal or in the correct proportions (Fairness, justice, impartiality)
- An even distribution of weight enabling someone or something to remain upright and steady (Stability, Equilibrium, Steadiness)

Maintaining Balance



Maintaining balance, the challenge



Multiple stakeholders

Complex environment

Uncertainty & change

Long term projects

Low margin of error

Stability Vs. fairness



What are we balancing, in the
first place

1%-3% Margin

1%-3% Margin

Long term Investment

Collaboration

Testing & Innovation

Talent

Processes and controls

Technology

1%-3% Margin

On time & on budget

Late & over budget

**Smart, professional,
hardworking**

**Understaffed,
undertrained**

**Collaborative &
forward thinking**

**Contentious and
litigious**

**Commercial
sophisticated**

**Commercially
straightforward**



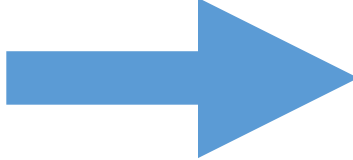
Beating the Odds

Upsetting the balance

Build on time & budget

Claim like it was a disaster

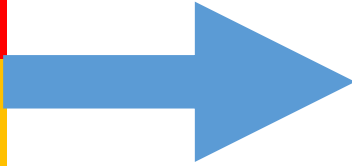
Costs



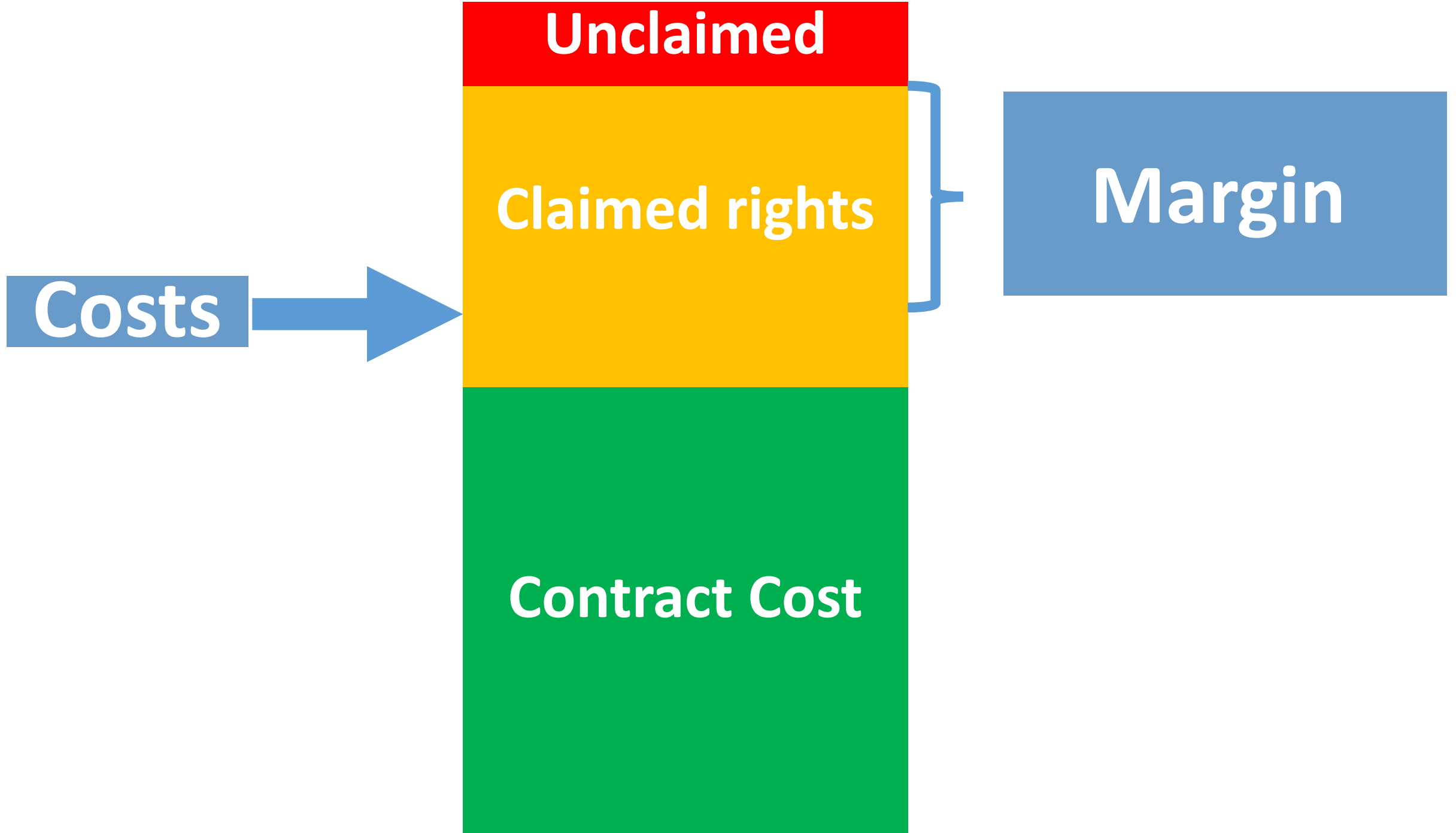
**Unclaimed
rights**

Claimed rights

Contract Cost

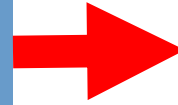


Margin



Disruptions off the critical
path

A simple warehouse



Logistical nightmare

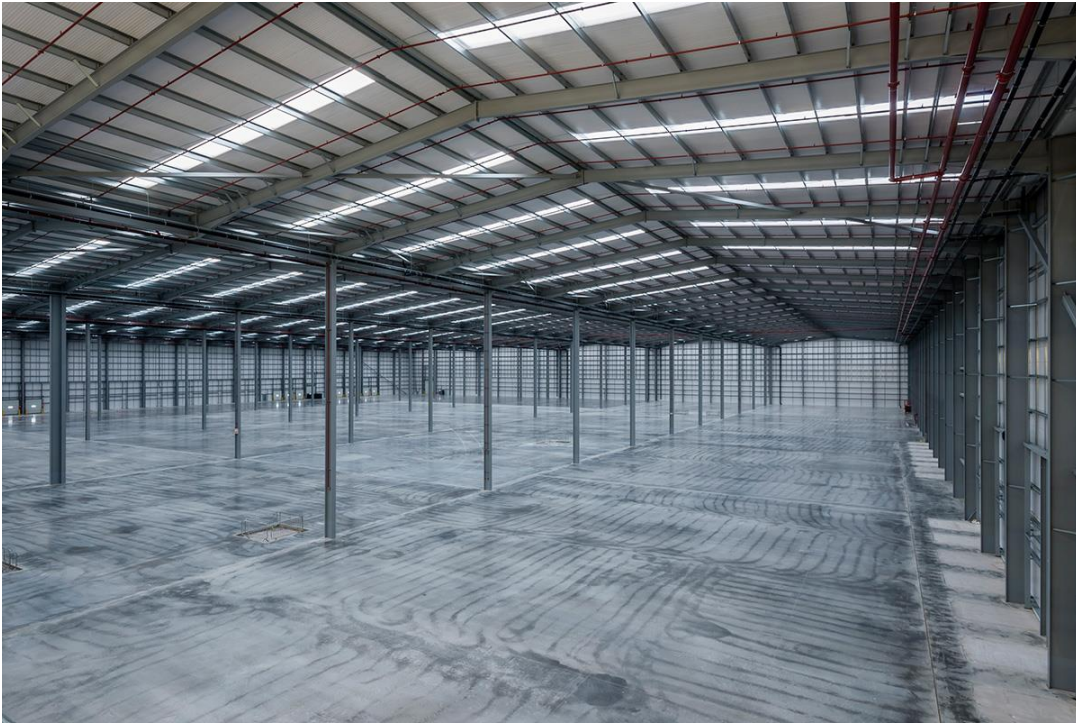


9 Months → 15 Months

20 M → 35 M

All the owners fault

A Delayed Warehouse



No LD's

LOP & Acceleration

Site overheads

The rent on the car of
the temp worker

A Delayed warehouse
within a successful
Airport build

Disrupted interior
works on floor 3

No LD's

LOP & Acceleration

Site overheads

The rent on the car of
the temp worker

A person wearing a hat and shorts stands in a vast, arid desert landscape with their arms raised in a gesture of triumph or awe. The terrain is characterized by layered rock formations and sparse vegetation. A large blue rectangular overlay is positioned across the middle of the image, containing white text.

Disruptions off the critical path

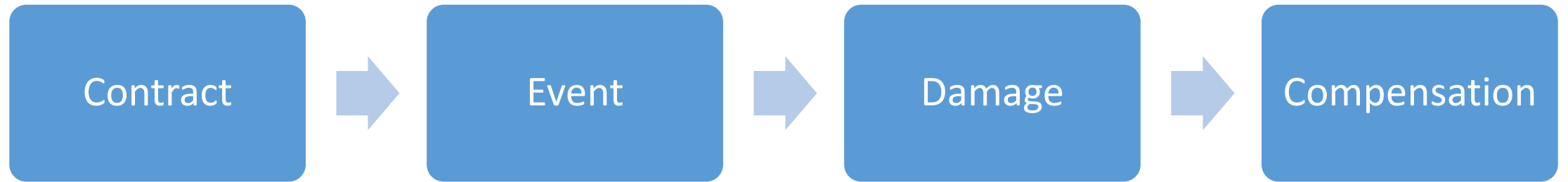
Are broadly unaccounted for

Defining Disruption:

Disruptions (as distinct from delay) is a disturbance, hindrance or interruption to a Contractor's normal working methods, resulting in lower efficiency.

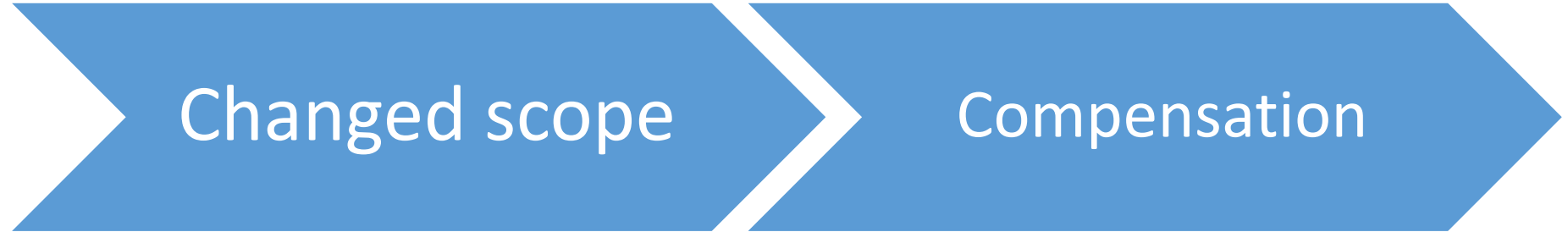
SCL, Delay and Disruption Protocol, Second edition

Rebalancing Contracts, in theory



In Practice

Scope



Time



A photograph showing two people and a horse plowing a field. The person on the left is wearing a blue jacket and a hat, and the person on the right is wearing a camouflage jacket and a hat. The horse is in the center, pulling a wooden plow. The field is dark brown soil, and the background shows a line of trees under a bright sky.

We calculate productivity through time

We calculate time through CPM

The Critical Path





The Critical Path

For every disruption on the critical path - how many disruptions occur off the critical path?

A long, narrow, dimly lit tunnel with concrete walls and floor, receding into the distance. The tunnel is illuminated by a series of lights along the ceiling, creating a strong sense of perspective. The walls are made of rough concrete, and there are some pipes and conduits visible along the ceiling. The floor is also concrete and appears to be a walkway. The overall atmosphere is industrial and somewhat somber.

Disruptions off the critical path are a
huge risk, liability or opportunity

Not looking wont save you



Global Claim – Design Changes (owner design liability)

Contractual drawings: 529

New drawings (post tender): 623

Drawing updates (post tender): 886

Total new drawings & updates: 1409

Drawings updated unchronological: 27

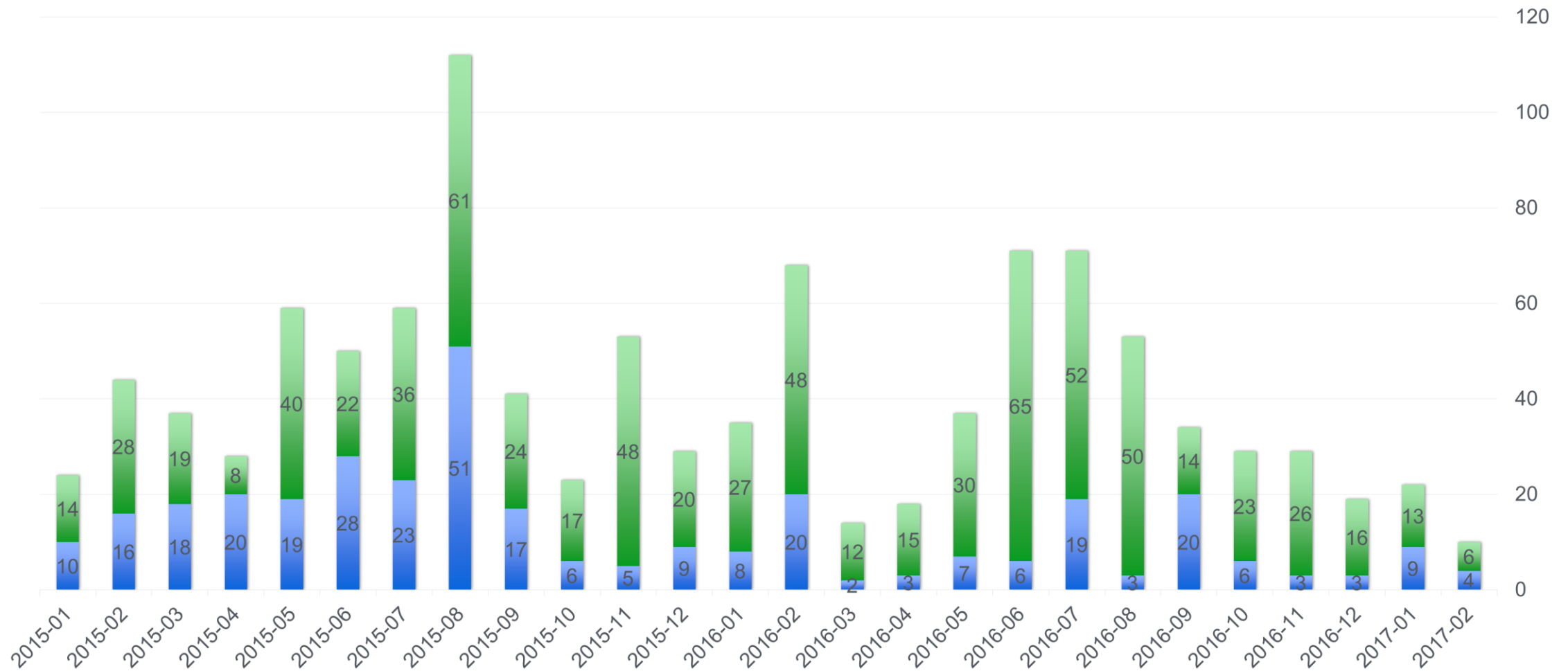
Drawings updated without version update: 89

Individual change orders: 3423

RFI's: 2422

- Rfi's not answered in 14 days: 1344
- Rfi's not answered at all: 466

Updates (Green) & Completely New Drawings (Blue)





Challenge: How do you control more activities?



How to control more activities?

Fully weighted up to date program throughout,
with full records and documentation

Hide, shout and pray

Dig Deep

You will only really know what is there, once you get digging





Engage

**Choose a prism,
dig deep and engage**

Contract

Collaboration

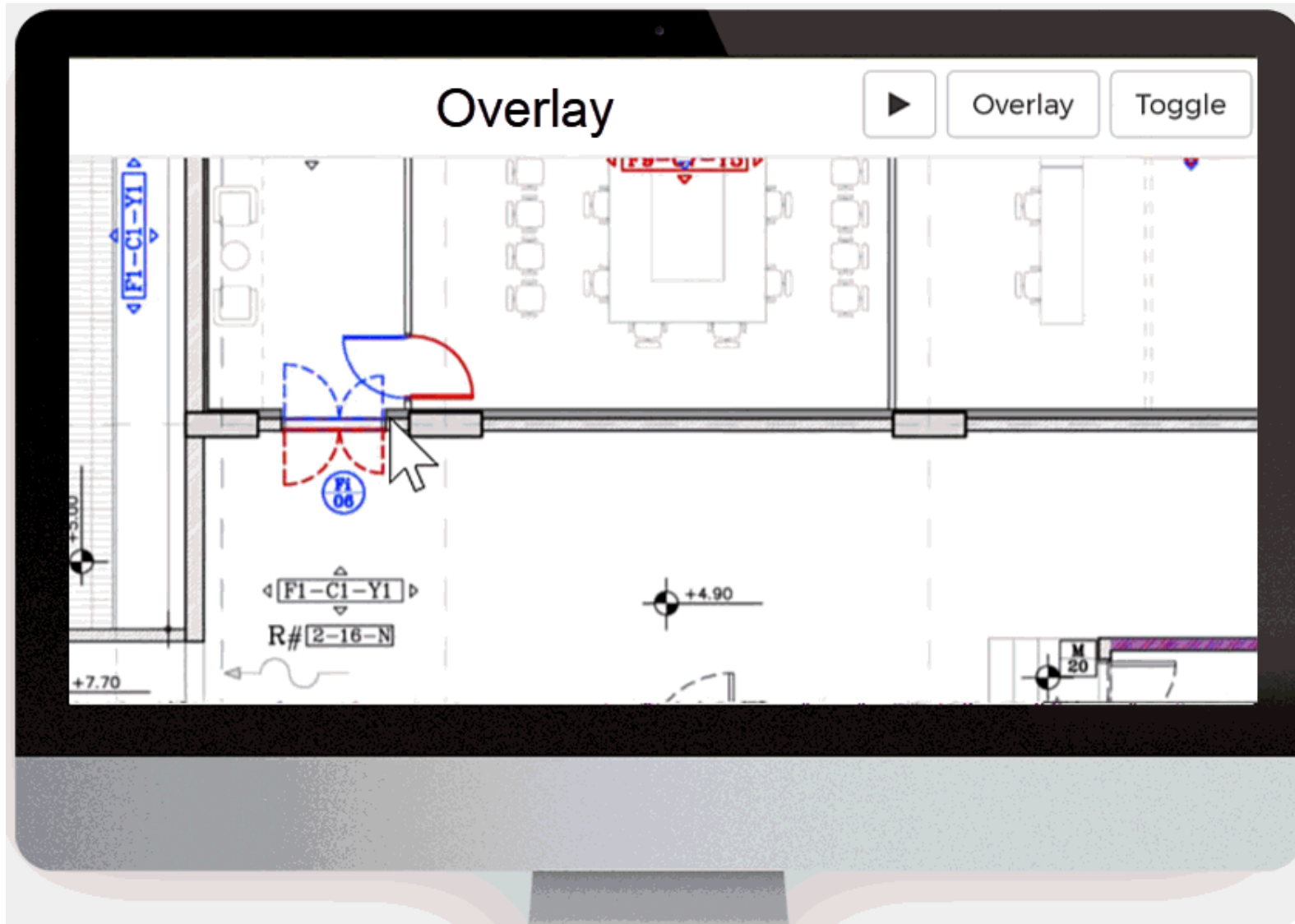
Program

Controls

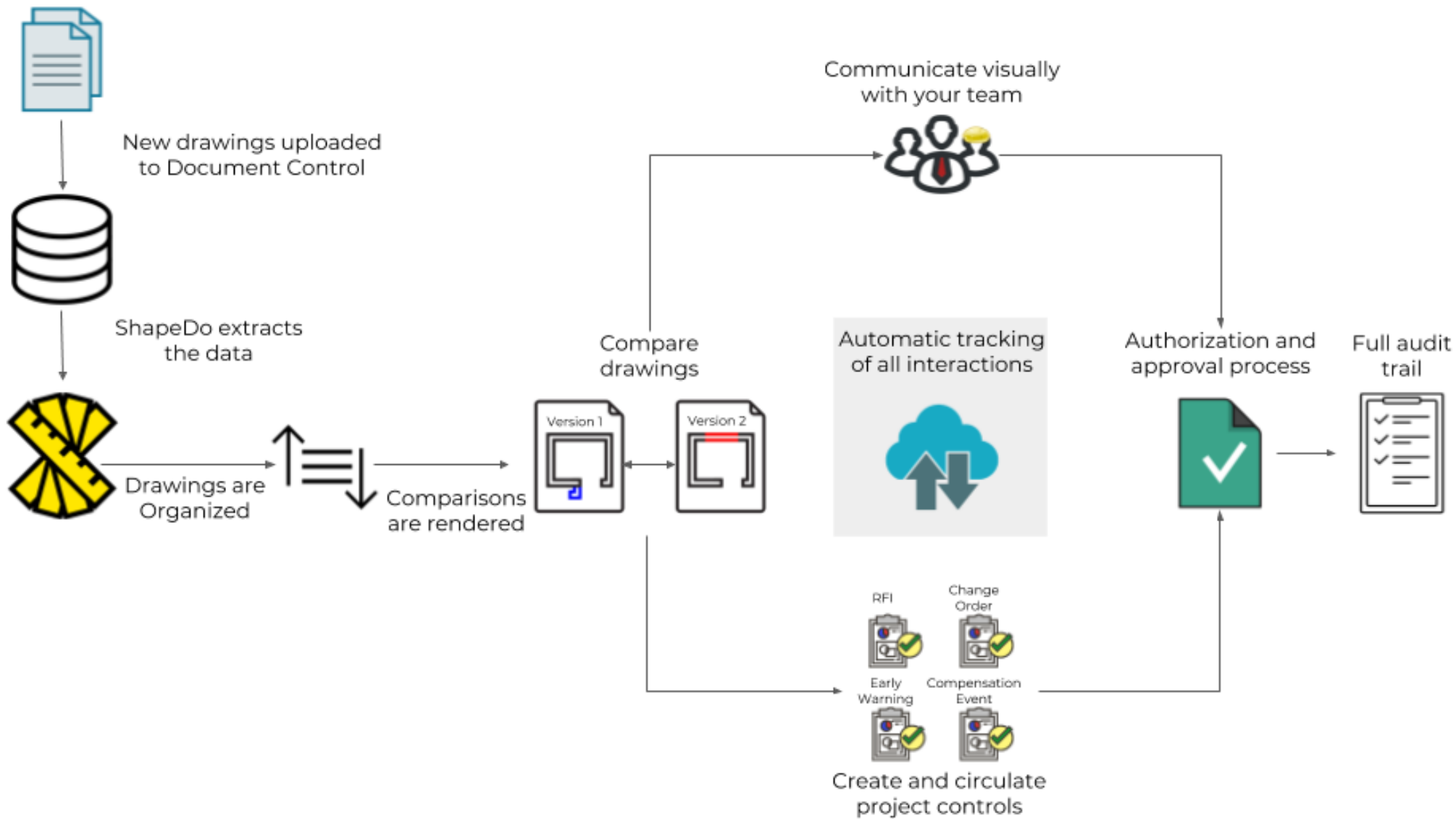
Design

Documentation

Dig deep on design



Engage and track



Maintaining balance

Contract serves goals

Flexible & robust

Dig deep & Engage

Control uncertain activities

Communication &
Collaboration

Effective tracking