

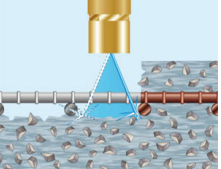
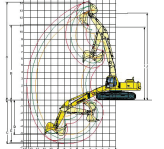
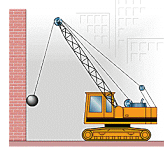
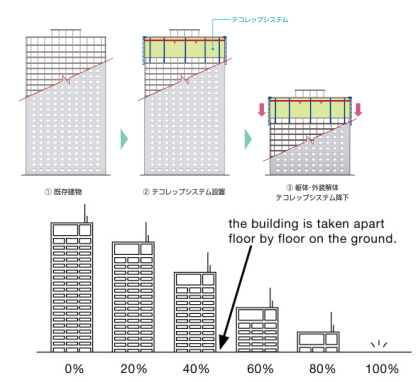
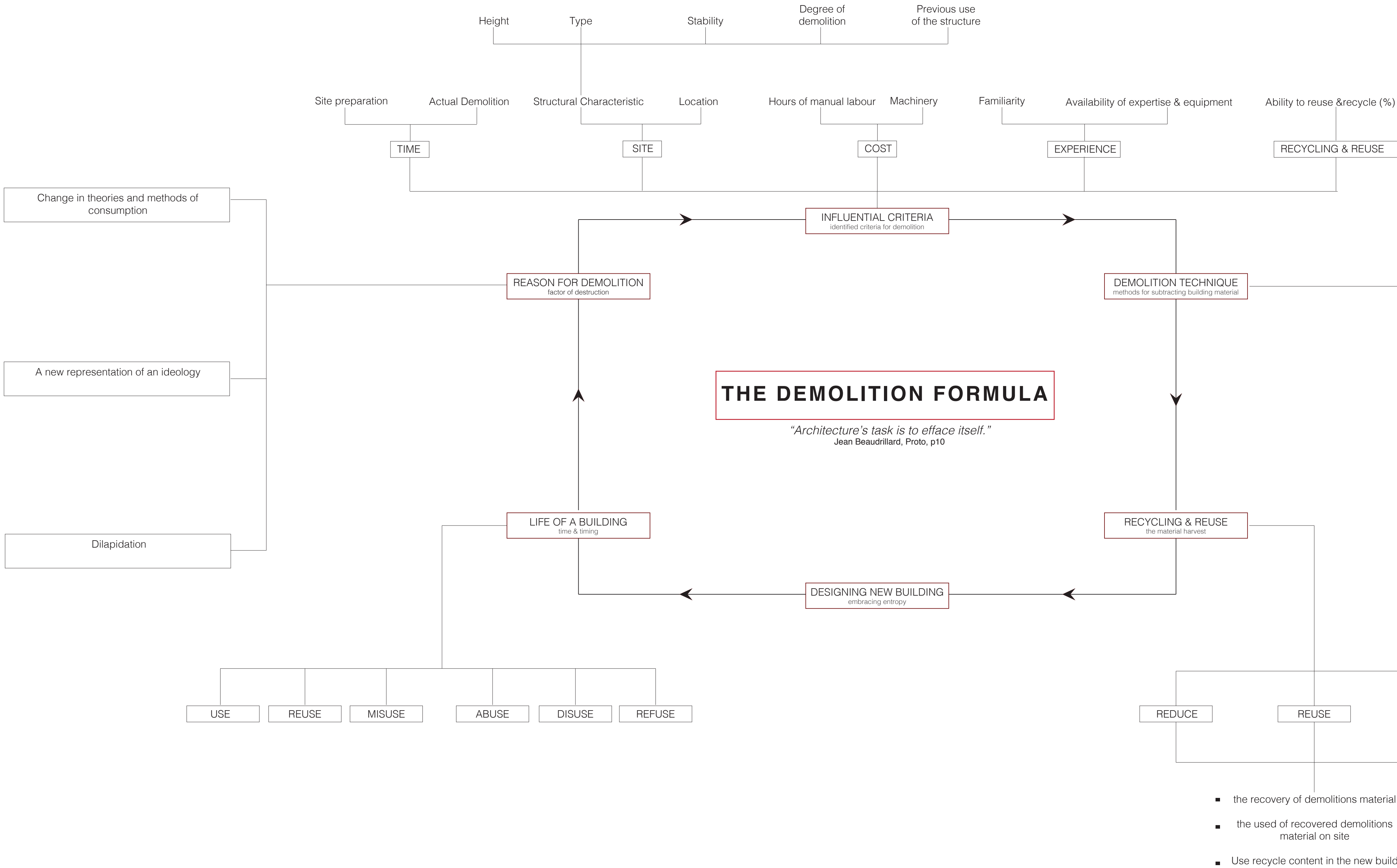


A NON-UMENTAL TALE:

a story of demolition

Demolition Theory Masterclass - OMA/AMO/The Berlage Institute, Delft

Matthew Brown & Fairus Kholid



"It's kind of like having a disassembly factory on top of the building and putting a big hat there, and then the building shrinks" from the top, Hideki Ichihara, Taisei Corp

"Although blasting technology and technique have improved, the use of explosives remains limited. This is because a quiet revolution is taking place in other ways to demolish buildings." Dario Trabucco, Building research at IUAV

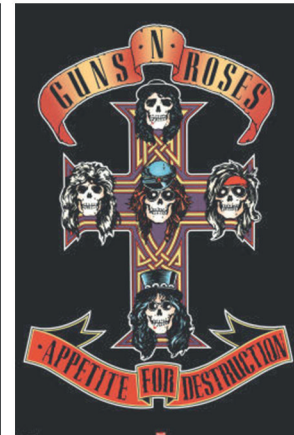
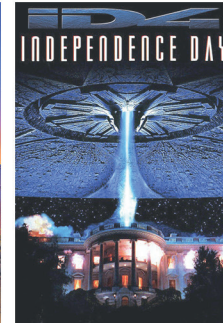
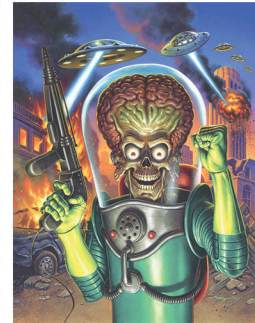
"The cartridges side step the "45 days of paperwork" that the use of explosives requires - this allowed the firm to charge just \$1600 a 20m concrete silo." Jan Khiloistovsky, co-owner, Green Break Technology

"In Europe the yearly construction and demolition (c&d) waste reaches over 1000 million tonnes." (Craven, P., CDE Global) This mining of existing structures provides material and energy to be reused or recycled, through various methods. This material is often used as aggregate for new construction.

The Undeveloper



This is the undeveloper. He is a destroyer of old ideologies and methods of consumption. A subtractive entrepreneur.



I need a shiny new casino.
First we must demolish
what is in the way.

I've never liked that
bulding anyway.

Once upon a time in Las Vegas, not too
long ago, a meeting between an
architect and the undeveloper occurred...

Level 3 - Nightclub with panorama

Level 2 - Casino, Lounge, Coffee Shop

Level 1 - Chinese Restaurant and Steakhouse

to be gutted and
fittings auctioned

Time to go...

Stats: 31 Stories, 108.5m
Date of construction: 1963-69

Steel reinforced concrete frame
Salvaged crushed for
aggregate. Resale: ~\$0.05/kg*
Steel Rebar melted down.
Resale: \$0.56/kg*

Aluminium frame windows.
2700kg/m3. Resale: \$1.52/kg*

Hazard: asbestos to be removed
before demolition commences.

Conversation continues on site. Demolition experts gather to present options...

I want a spectacle.

The Undeveloper



Our process "demolishes from the bottom up."

Shigeru Yoshikai Ryo Mizutani
Kajima Corp.



the building is taken apart floor by floor on the ground.

Shrinking process from bottom allows recycling of 20 materials.

Recycling: 93%
Price: 5-10% more than conventional.
Noise pollution: medium
Air pollution: low
Time: 15% shorter
Exp: 7 yrs.



Our implosions "create instant visibility for...new development projects."

Jack Lotzeaux
Controlled Demolition, Inc.



Implosion drives catastrophic structural failure.

Recycling: 90%
Price: cheapest
Noise pollution: very high
Air pollution: very high
Time: short demo, but long salvage period.
Exp: 58 yrs
Bonus: Spectacle can be a marketing gem.



"We work top to bottom, floor-by-floor."

Makoto Kayashima
Taisei Corp.



20 temporary columns, each 20m high are placed on giant beams two floors down. Floors are destroyed and debris dropped below.

Recycling: 90-99%
Price: 10% more
Noise pollution: low
Air pollution: low
Time:
Exp: 3 yrs
Bonus: Generates energy from reduction process.

As the clock strikes twelve on
New Years Eve, the undeveloper
lights the fuse of progress...

Dust travel distance: approx 10
miles w/ 6mph wind speed

implosion heard
5 miles away

**Method: 100 pounds
of dynamite detonated**

**Length of spectacle:
17 seconds**

No. of spectators: 10,280




The spectacle is a double act, as part of a hollywood film.

Warner Bros. given permission to plant special explosives to give impression building was attacked by martian lasers.

Lighting fixtures left within structure to give impression building is inhabited at time of demolition.




Mars Attacks!, Tim Burton. 1996.



The shiny new building ends up being a bit too shiny, and burns guests and everything around it.

“It is a physical monument to capitalism destroying itself...” - Oliver Wainwright

“We call it the death ray”
- guest Bill Pintas

A tall, modern glass skyscraper, likely the New York City City Hall, is the central focus of the image. The building's facade is composed of numerous rectangular glass panels that reflect the surrounding environment. A large, thick, red 'X' is superimposed over the entire image, crossing from the corners towards the center. This 'X' has a slightly textured, fabric-like appearance. In the background, a cityscape with various buildings and a highway is visible under a clear blue sky. In the foreground, a mountain range is partially visible on the left side.

The shiny monument to modernity is
condemned. The “illusion of permanence”
is uncovered as fallacy and the
undeveloper learns a powerful truth.

Chapter Two: The New Babel

The art centre should be semi public and semi private

I just bought a dilapidated building which I think can be torn down for an art gallery.

Do you have any option for that? Is it financially viable?

You can deconstruct and reconstruct and adapting the art space inside it.

That building was beautiful... we should preserve it.

Palais de Tokyo
built in July 1936

Permanent
museum in 1961



Frederic Mitterand,
Former French Minister of Culture and Communication



The Undeveloper



The Architect

Once upon a time in Paris, not too long ago, a meeting between an architect and the undeveloper occurred...

The undeveloper meets with the contractor on site to discuss on his vision on the project.

Beetles responsible for decay : woodworm (*Anobium punctatum*), death watch beetle (*Xestobium rufovillosum*), powder post beetle (*Lyctus* spp), and house longhorn beetle (*Hylotrapes bajulus*)

Plants with roots are breaking the structure apart.

We might try to restore finishes.....

This building will celebrate its past, its scars, rather than paint over them

or we might try to find a the same type of wall covering....

Concrete can last for 1000 years

Concrete is the 2nd most consumed substance in the world behind water.



The window is blocked up, the door is blocked up....

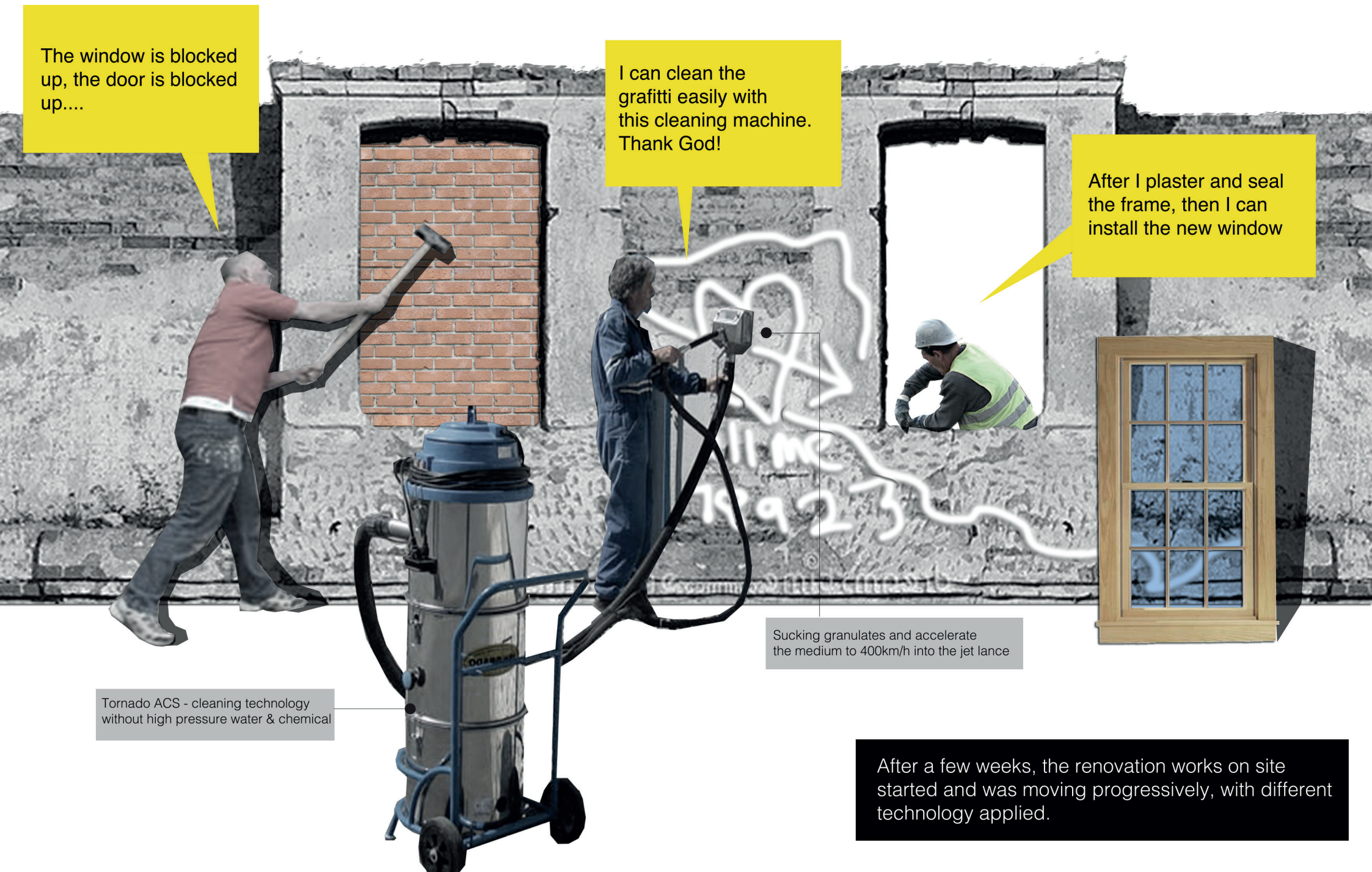
I can clean the grafitti easily with this cleaning machine. Thank God!

After I plaster and seal the frame, then I can install the new window

Tornado ACS - cleaning technology without high pressure water & chemical

Sucking granulates and accelerate the medium to 400km/h into the jet lance

After a few weeks, the renovation works on site started and was moving progressively, with different technology applied.



ADDITION

REDUCTION

CONNECTION

EXPANSION

INSERTION

DO NOTHING?

The undeveloper and architect discuss 6 ways of adapting the existing structure

The structure has been damaged by corrosion....



SITE SUPERVISOR

The building wasn't built to be air-conditioned



PROJECT MANAGER

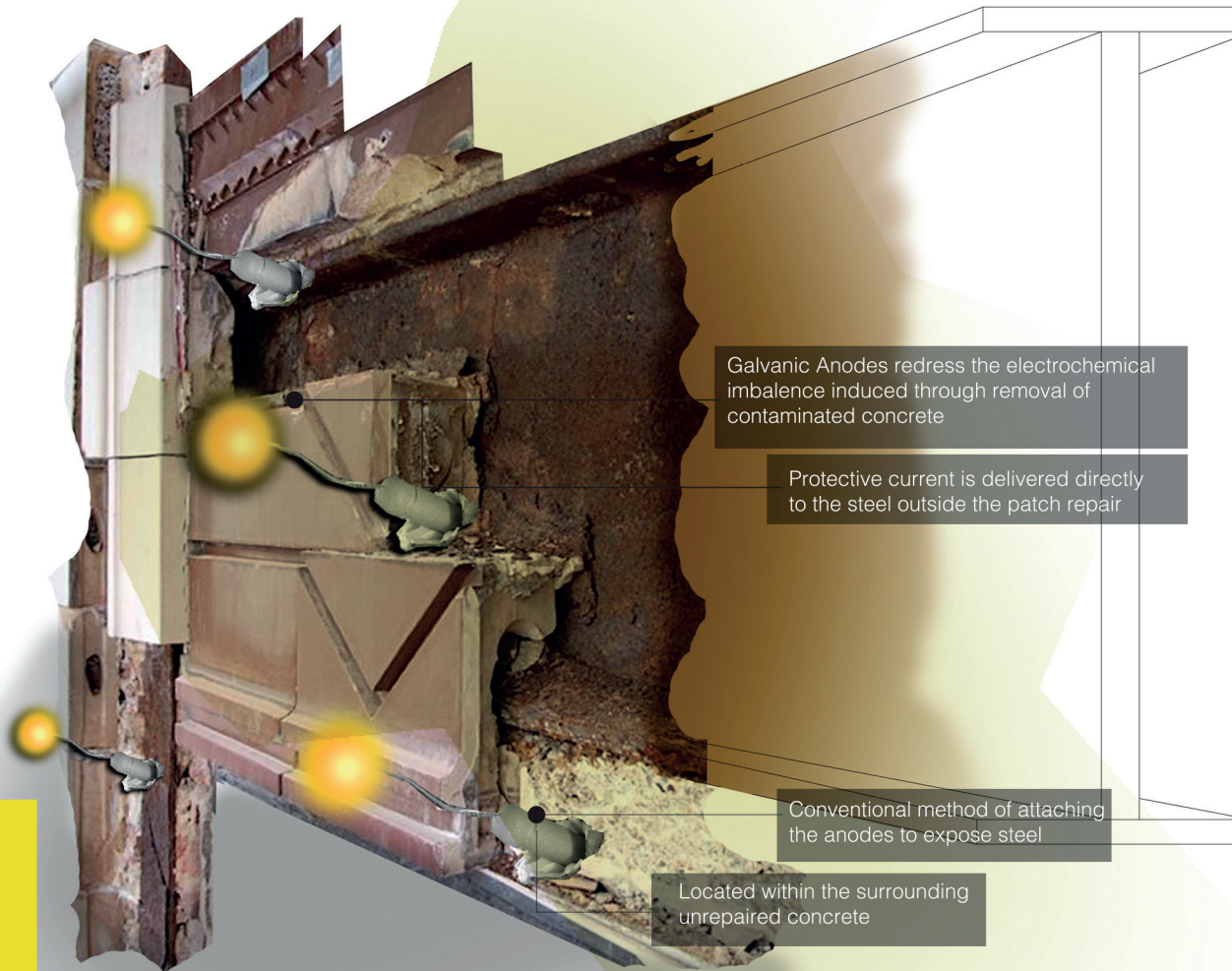
Condensation in the wall resulted in corrosion



ENGINEER

Something unexpected occurs on site.
The construction team discuss what to do next...

The use of Galvanic Anodes can repair this to a good condition.



The palais has
been reborn...

...this method could
work with much
of the city.

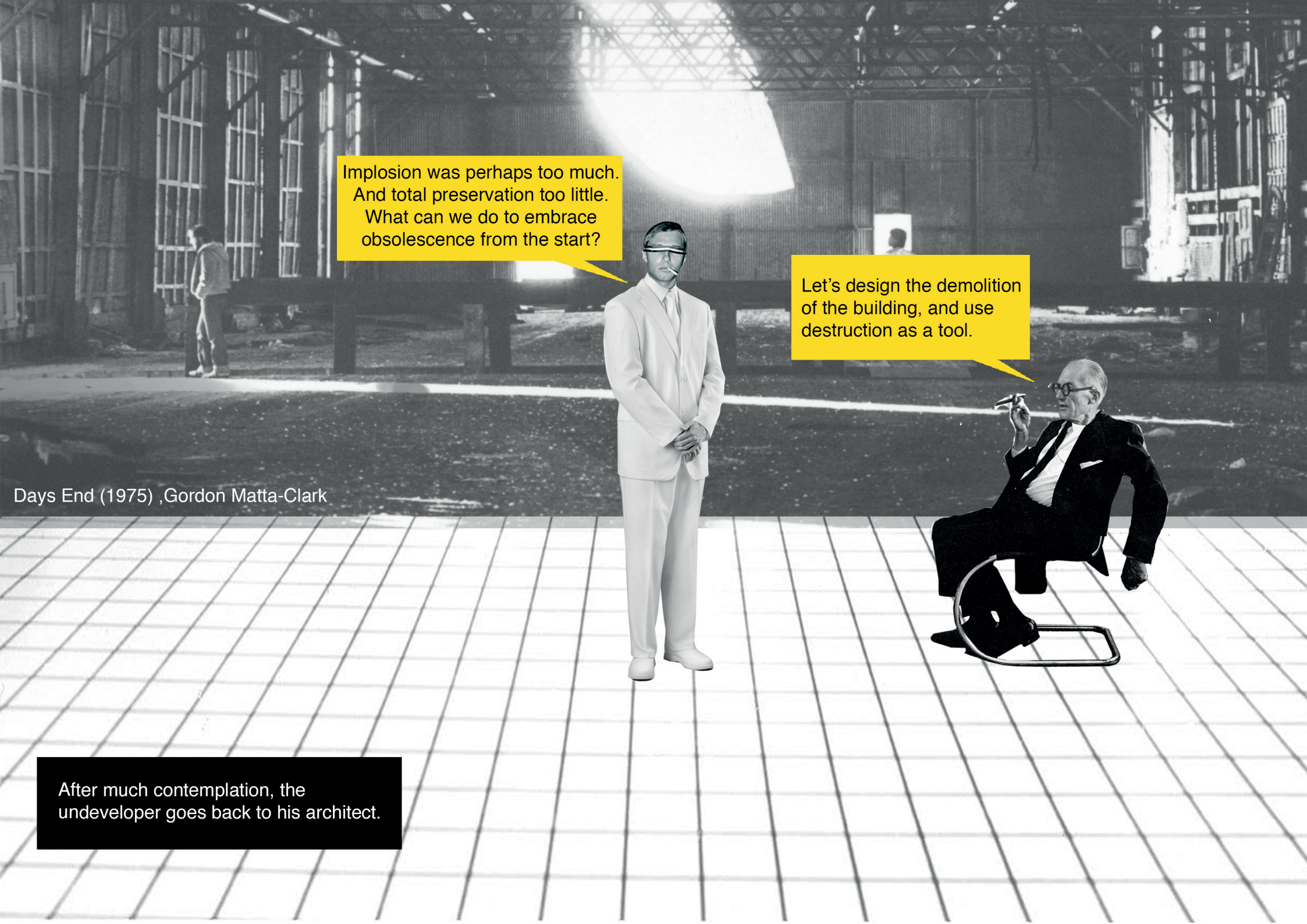
Gordian Knott by Henrique Oliviera

The renovation takes 10
years and divided into 2 phases
(Phase 2: 16 500 m2,
phase 1: 7 800 m2)



The undeveloper is satisfied with the renovation
work and learns how to work with existing
buildings.

Chapter Three: The New Babel



Implosion was perhaps too much.
And total preservation too little.
What can we do to embrace
obsolescence from the start?

Let's design the demolition
of the building, and use
destruction as a tool.

Days End (1975) ,Gordon Matta-Clark

After much contemplation, the
undeveloper goes back to his architect.

Detail, The Tower of Babel by Peter Brueghel the Elder, 1563



The Tower of Babel, trying to reach the heavens, shows the undeveloper the idea of a building in perpetual destruction and construction...

"...the relationship of the design, the construction and the occupation is also related to the eventual destruction of the building." (Obrist, H.U. Re:CP. 2003)



Cedric Price

Ruins in reverse, "that is the opposite of the "romantic ruin" because the building's don't fall into ruin after they are built but rather rise into ruin before they are built." (Smithson, R. The Collected Writings. 1996)



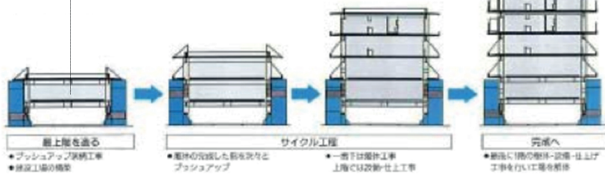
Robert Smithson

The undeveloper decides to build a modern day Tower of Babel...



The Undeveloper

Floors built on hydraulic jacks and lifted one by one upwards.



AMURAD
Kajima Corp., Japan

Our “automatic up-rising construction” builds floor by floor from the bottom. It would work well with our cut and take down method.

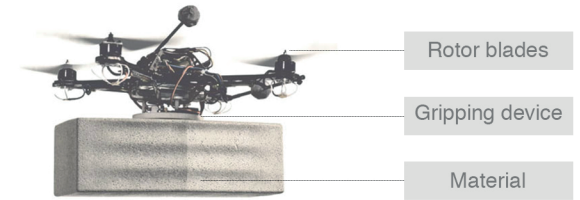
Shigeru Yoshikai Ryo Mizutani



Let us build to destroy...



The undeveloper discusses innovative techniques with his demo experts



Programmed robotics can help us to build and to take apart with absolute precision.

We could put dynamite in the structure, to be wired up when we're ready...

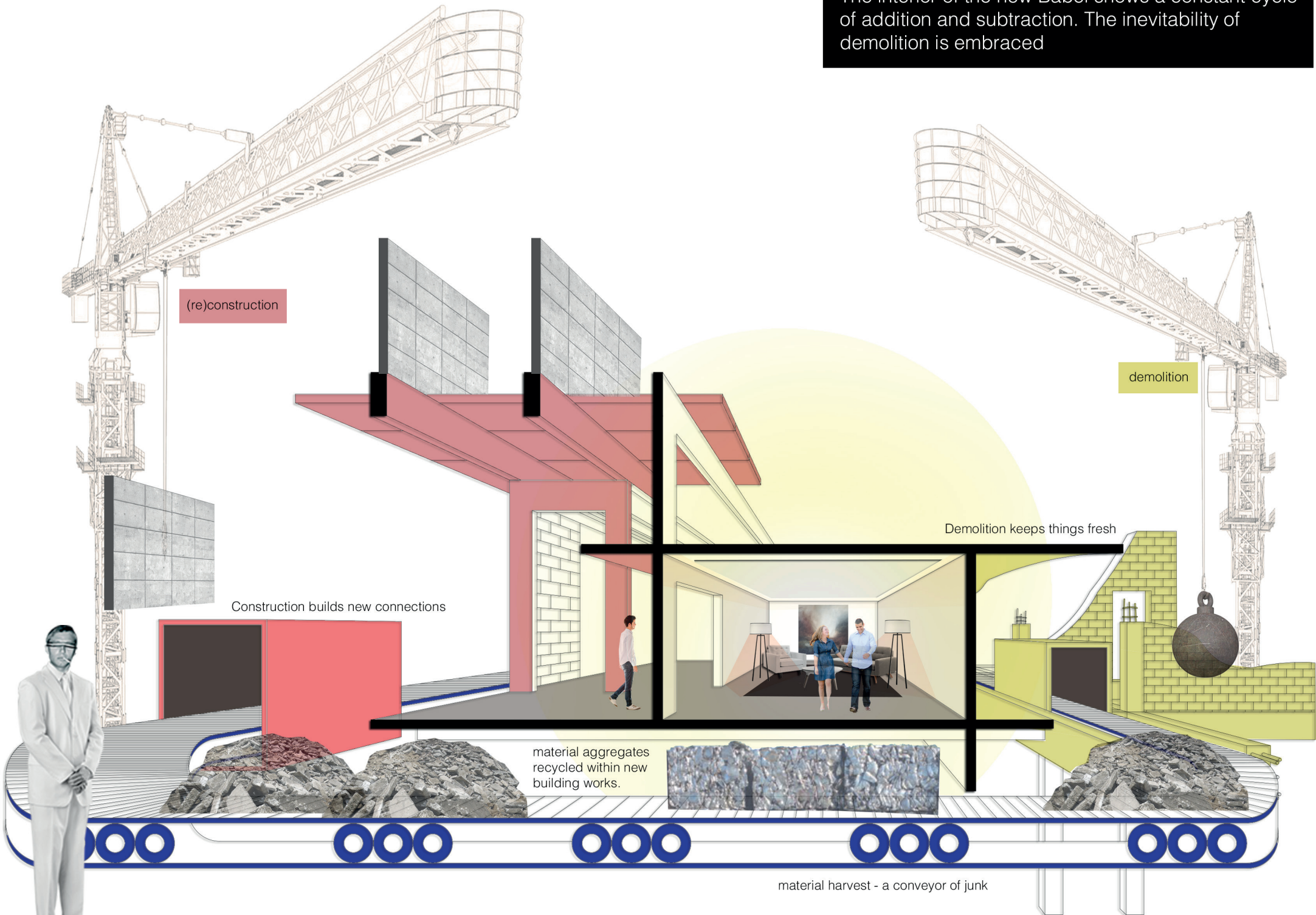
“Kisho Kurokawa’s Capsule tower was proposed to have dynamite within the walls, so they would auto-destruct after 30 years...”

-Frieze Magazine

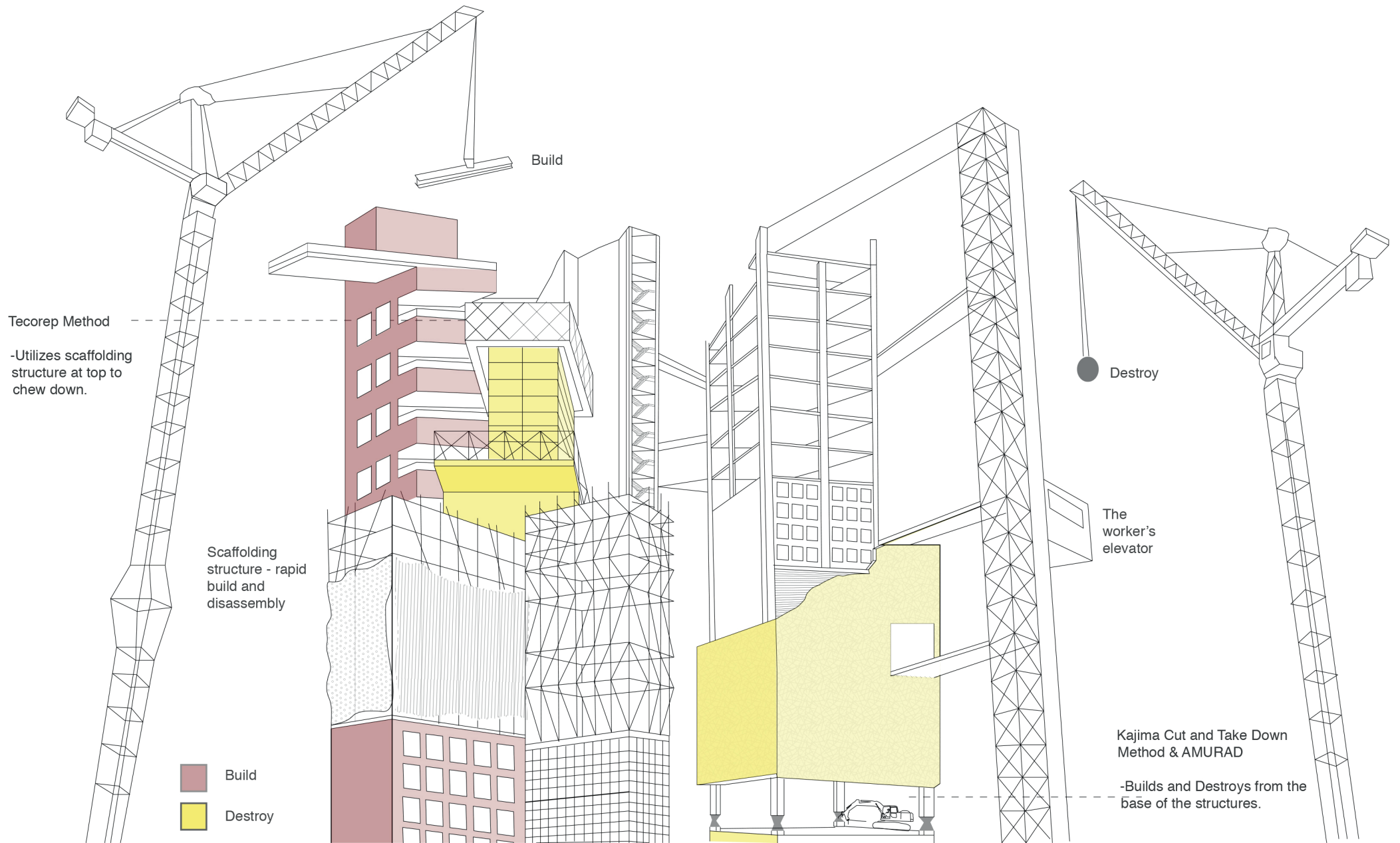
Pods can be interchanged/updated with more socially relevant spaces



The interior of the new Babel shows a constant cycle of addition and subtraction. The inevitability of demolition is embraced



And the developer builds this new Babel, embracing both building and unbuilding. It shows destruction not only as an architectural tool, but a whole new domain.



The End.

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