

Getting Creative With The Cloud

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The corporate slides: Young but ambitious



Success

New money into play

New Products Services and Solutions

New Digital Intellectual Assets

New high value jobs

Increased GVA

Sustainability and quality of life

The digital economy – shift happens

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FAST MOVING

CONSTANTLY
CHANGING

GLOBAL

BUILD IT & THEY
WILL COME
WONT WORK

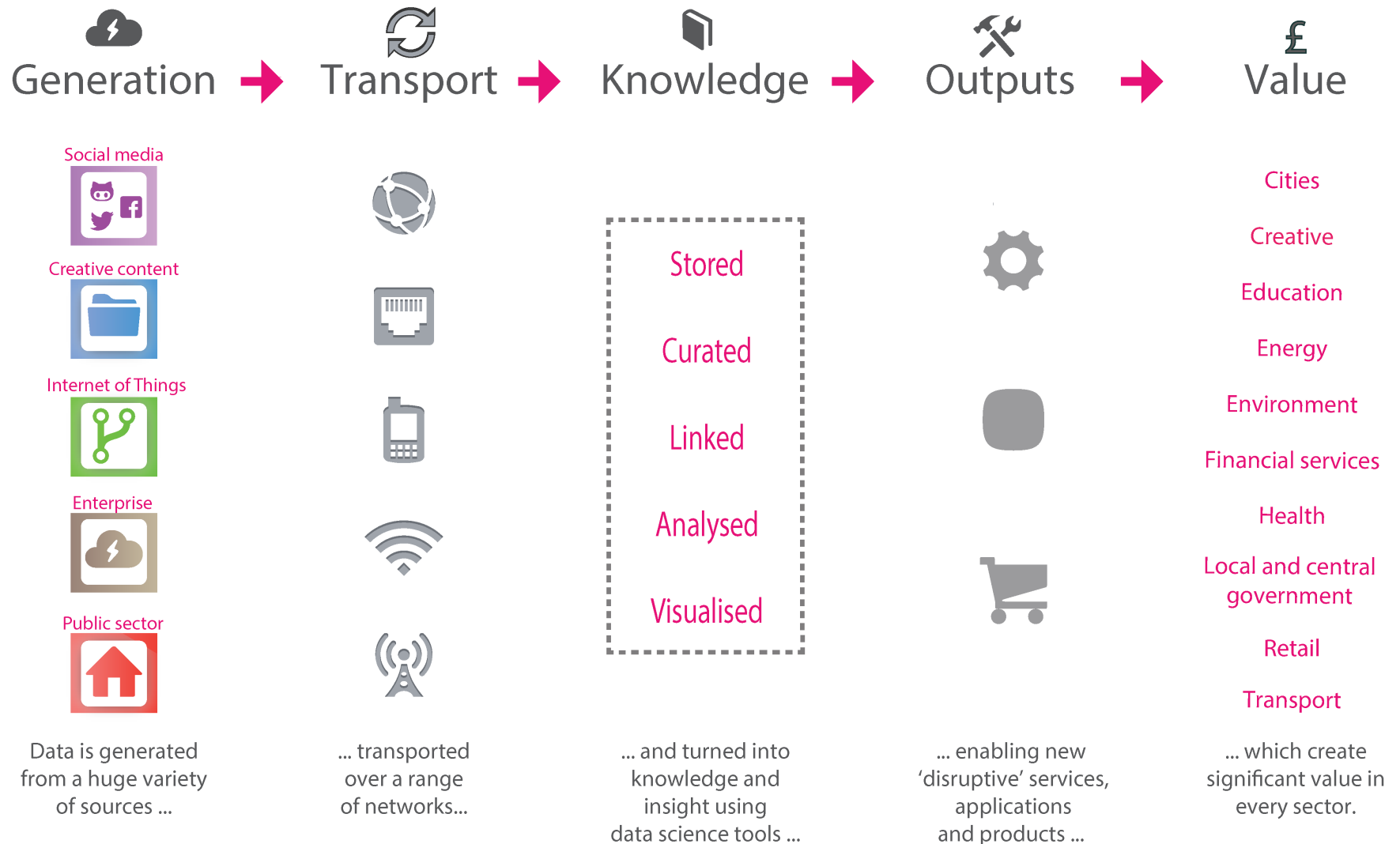
BEING
FAST
IS KEY



‘a few years ago a cloud was something in the sky, a tweet was something you heard in the garden, Skype was a typo and 4G was a parking spot’

The Data Value Chain (D.V.C.) – our ‘field of play’

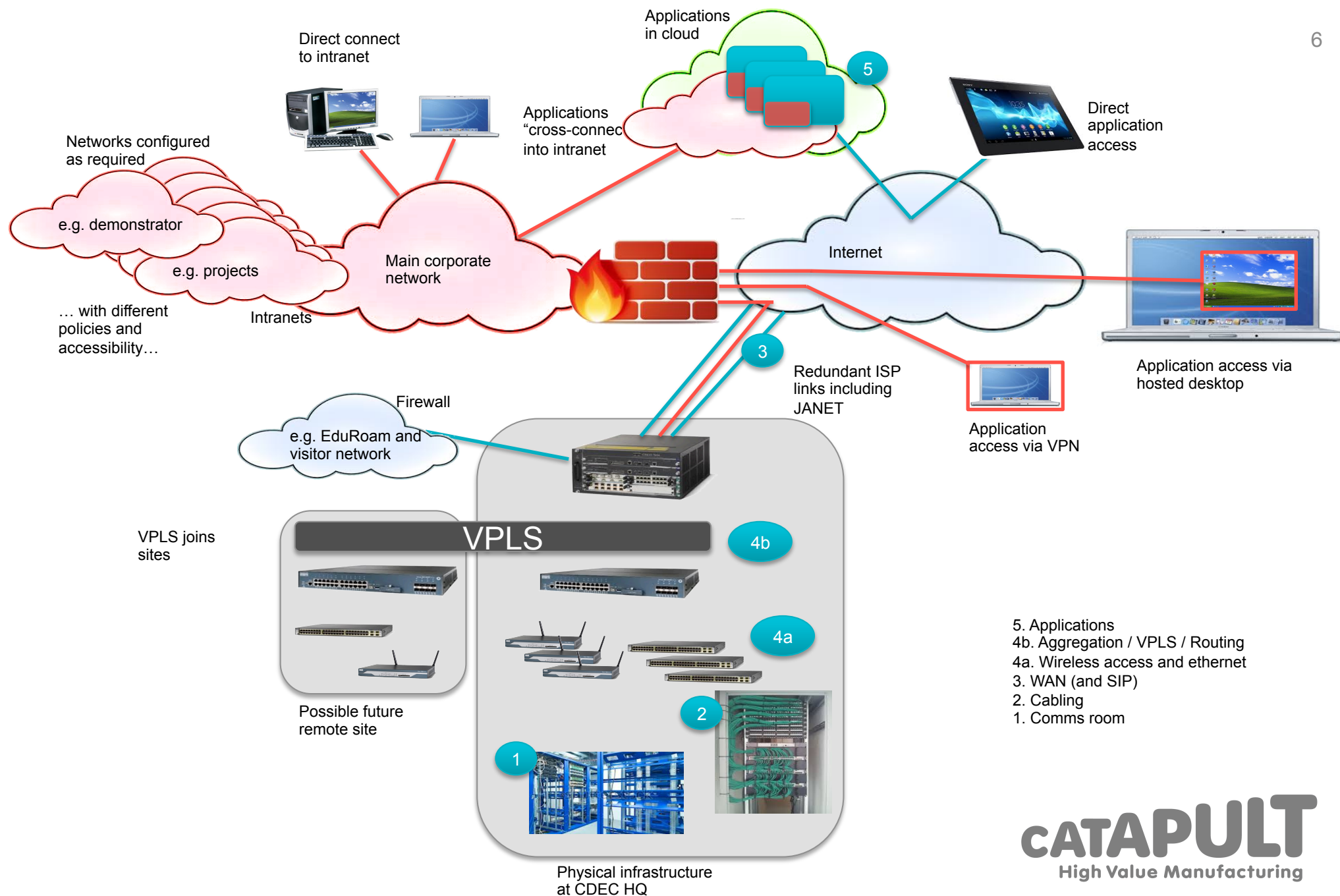
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Eat the dogfood: Clean slate IT infrastructure

- Intranet starts in the cloud extends to physical network
- All services cloud based but cross-connected to intranet
 - In building only local services – DNS, DHCP, Print etc.
- Co-located services (where possible)
 - so cross-connect in same datacentre – *the cheap bandwidth*
- For all business functions





But what do we actually do?

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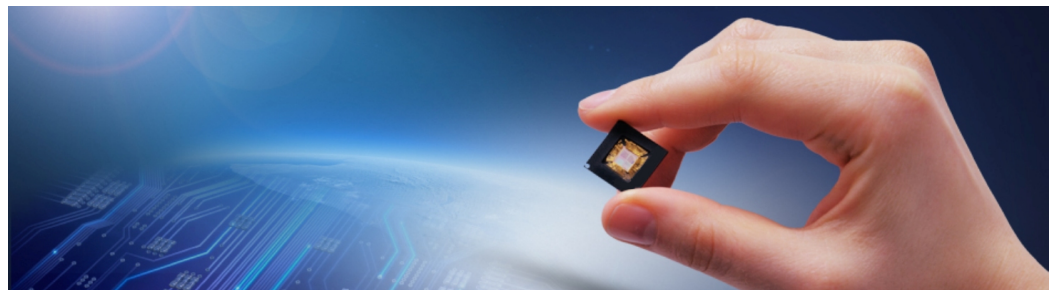
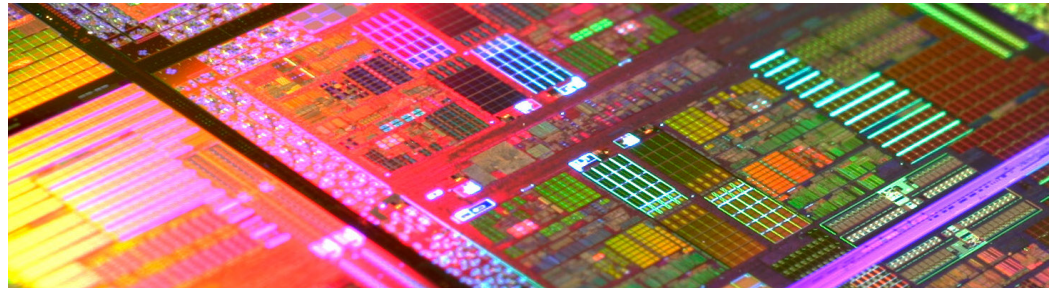
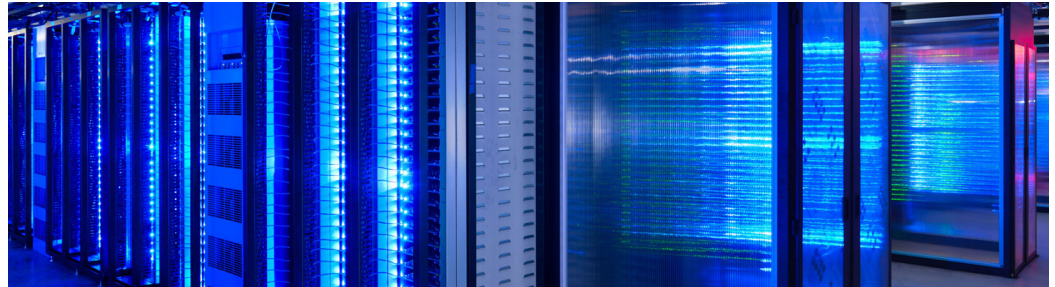
Software development, so:

- build & test in the cloud
 - Continuous integration, build and rigorous test
- Could we turn into SaaS?
 - Encourage best SW dev practice in SMEs

More generally

“Workflow as a Service”

- Si design is complex tool chain
- Want “cloud burst” at times
- Flexibility in licensing
- IP owners want trusted partner



UK programme on “e-Infrastructure”

Industrial Sector Awareness

Capability

Connections

Computing

Hardware

Software

Data

Security

Networks

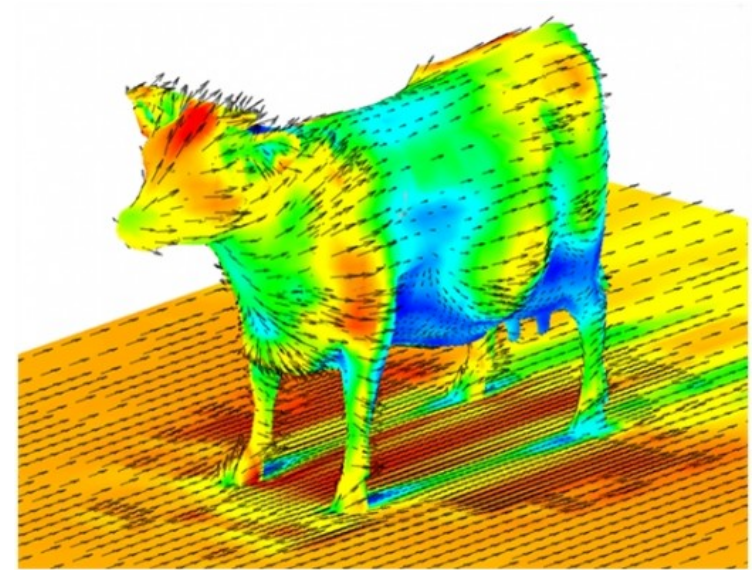
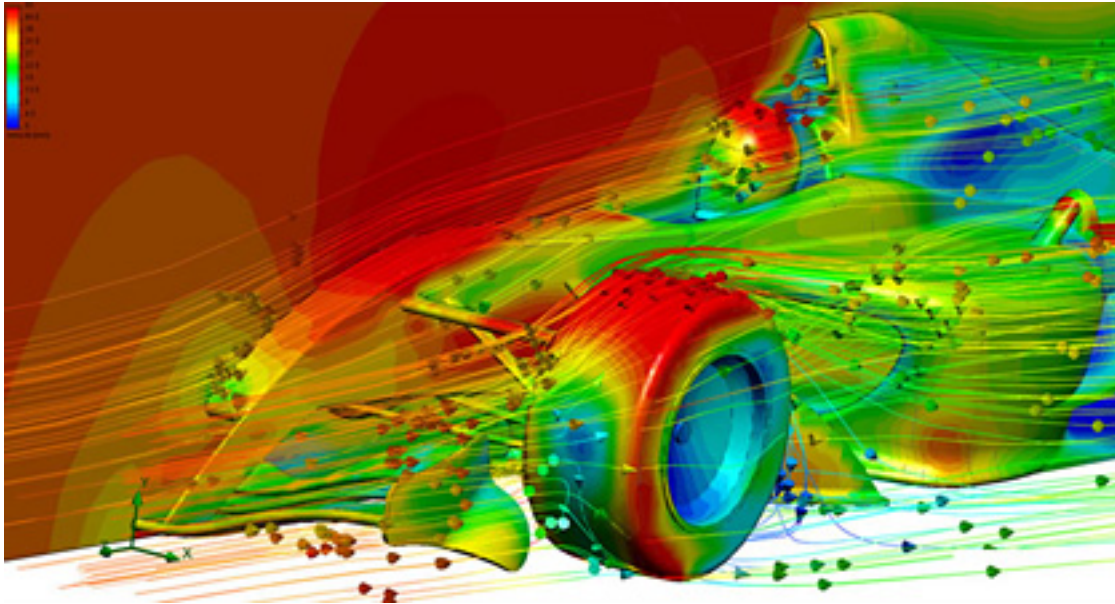
Computing &
Data Skills

Sector
Domain
Knowledge

Sector
Specific
Solutions

The high end of engineering...

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- Formula One - CFD replacing wind tunnels
- FIA now limit number of teraflops used
 - Leading to more efficient software!
 - CFD now being embedded in CAD software!

For every new house...

British Standards - Structures and Loadings

BS 4978 :1996 Specification for visual strength grading of softwood

BS 5268 Structural use of timber

BS 5268 -2:2002 Code of practice for permissible stress design, materials and workmanship

BS 5268 -3:2006 Structural use of timber. Code of practice for trussed rafter roofs

BS 5268 -5:1989 Code of practice for the preservative treatment of structural timber

BS 5268 -7.2:1989 Recommendations for the calculation basis for span tables. Joists for flat roofs

BS 5268 -7.5:1990 Recommendations for the calculation basis for span tables. Domestic rafters

BS 5268 -7.6:1990 Recommendations for the calculation basis for span tables. Purlins supporting rafters

BS 5268 -7.7:1990 Recommendations for the calculation basis for span tables. Purlins supporting sheeting or decking

BS 5950 Structural use of steelwork in building

Wind load Calculations to BS 6399:Part 2:1997

Duopitch Roofs

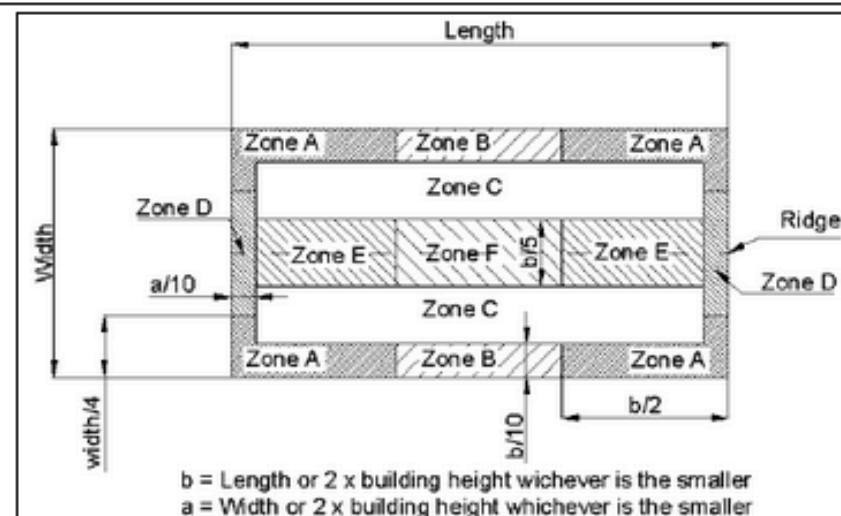
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Town Terrain	Cambridge country	Basic Wind Speed	23m/sec
Distance From Sea	100km	Height Above Sea Level	50m

Building Height (m)	Pitch 5° Wind Loads (kN/m ²)					
	Zone A	Zone B	Zone C	Zone D	Zone E	Zone F
5	-1.65	-1.05	-0.60	-0.98	-0.83	-0.60
10	-2.06	-1.31	-0.75	-1.22	-1.03	-0.75
15	-2.30	-1.46	-0.84	-1.36	-1.15	-0.84
20	-2.46	-1.57	-0.90	-1.46	-1.23	-0.90

Building Height (m)	Pitch 15° Wind Loads (kN/m ²)					
	Zone A	Zone B	Zone C	Zone D	Zone E	Zone F
5	-1.35	-0.75	-0.60	-1.28	-1.13	-0.83
10	-1.69	-0.94	-0.75	-1.60	-1.41	-1.03
15	-1.88	-1.05	-0.84	-1.78	-1.57	-1.15
20	-2.02	-1.12	-0.90	-1.90	-1.68	-1.23

Building Height (m)	Pitch 30° Wind Loads (kN/m ²)					
	Zone A	Zone B	Zone C	Zone D	Zone E	Zone F
5	-1.05	-0.60	-0.60	-0.98	-0.83	-0.60
10	-1.31	-0.75	-0.75	-1.22	-1.03	-0.75
15	-1.46	-0.84	-0.84	-1.36	-1.15	-0.84
20	-1.57	-0.90	-0.90	-1.46	-1.23	-0.90



Emerging engineering...

- Additive manufacturing
 - or 3D printing



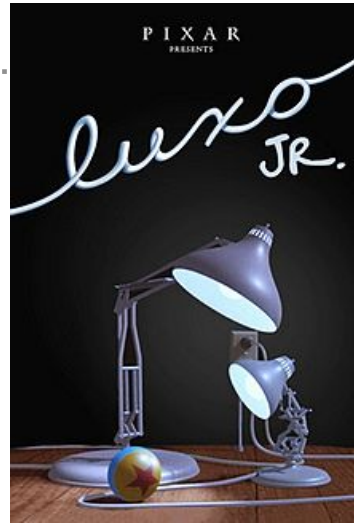
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Down on the render farm

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Luxo Jr. 1986...



[illegible]

What next?

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ARTMAPS



Derek McAuley

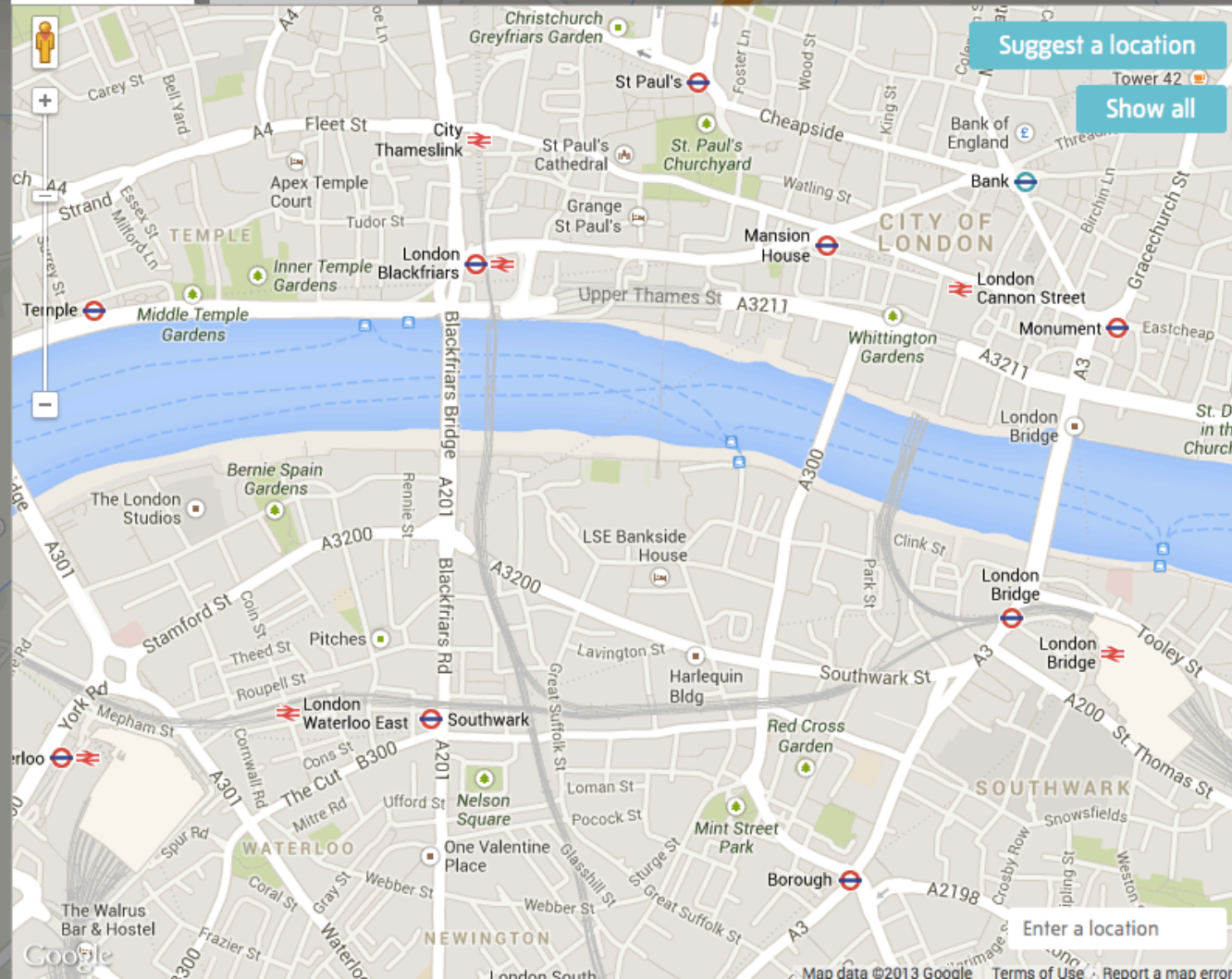
Search for Artworks



Find a place

Location

Discussion

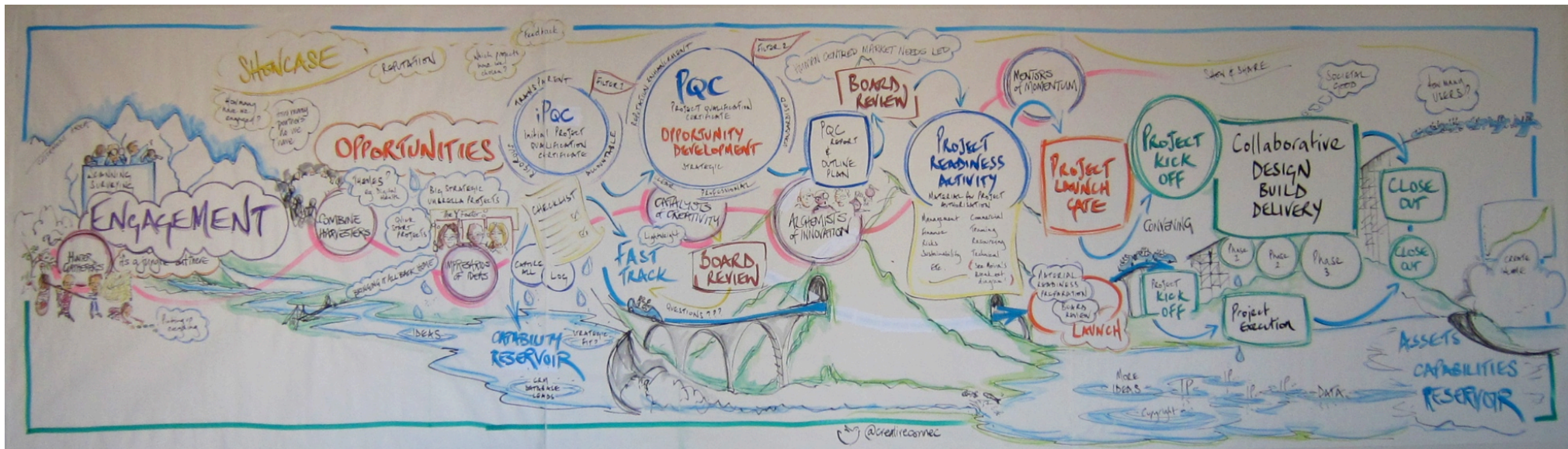


Swinging

ARTIST Wassily Kandinsky (1866-1944)

DATE 1925

[View on Tate Online](#)



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