

# More than materials:

## managing what's needed to create value in construction

### logistics

is a design issue  
is *more than materials*

### value

is what the customer wants  
is *defined by the customer*

### creating value in construction needs ...

people  
information  
equipment  
materials  
prior work  
safe external conditions  
safe space  
**to flow**

### waste interrupts flow

Rework  
Waiting  
Over-ordering  
Multiple insurances  
Poor payment systems  
Multiple handling of materials  
Damaged materials  
Accidents  
...

### Support activities (= logistics) enable flow & value creation

Site security  
Safety & health  
Materials Management  
Site infrastructure  
Waste management  
Traffic management  
Welfare & accommodation  
...

### logistics (dictionary definition)

art of movement and supply of **troops** (Oxford)  
procurement, maintenance & transport of **military** matériel,  
facilities & personnel (Webster)

### lean logistics

*all the operations needed to deliver goods or services, except  
making the goods or performing the services*

(Baudin 2004)

i.e. all support activities that enable value creation

### construction logistics

**movement, supply & welfare of builders**  
*all the operations needed to deliver the building, except  
assembling the elements*

### how can we measure it?

% **tasks** done when planned

time **people** spend waiting  
walking distances of skilled tradesmen  
site safety and sickness records

time **materials** spend waiting  
area used for storage on-site  
# times materials moved once on-site  
end-to-end cost of materials  
...

### Construction Logistics Plans

*how* the project will be delivered so as to:  
minimise construction time and cost  
minimise carbon emissions during construction  
minimise traffic disruption  
protect the environment and the public  
provide for the welfare of all on the project  
make optimal use of skilled labour in short supply

*Greater London Authority already  
asks for CLPs on larger projects*

### CLP Scope – some or all of ...

Health and Safety Management  
Procurement  
Site Security  
Traffic Management  
Administration Offices  
Site Housekeeping  
Environment Management  
Site Waste Management  
Insurance  
Information Management  
Personnel Management  
Materials Management  
Site infrastructure  
Plant, tools & equipment management & maintenance  
Payment Systems

### Implications for

green agenda  
procurement

### the design process

roles & responsibilities  
ergonomics  
skills shortages

### next steps

new logistics skill sets  
**design product & production process together**  
review EU procurement rules  
new stories + new research