

How Lean Consumption Can Transform Retailing and Supply Chains

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Our Background

- We began our research by trying to understand what lay behind the consistent success of **Toyota**
- We discovered the key was a relentless focus on creating **brilliant processes**, which flowed in line with customer demand with minimum wasted time & effort
- We distilled some simple **principles** for lean design, production and supply chain processes
- And we began to learn how these might work in the grocery industry with **Tesco**, starting in 1995
- Which led to my participation in the ECR movement

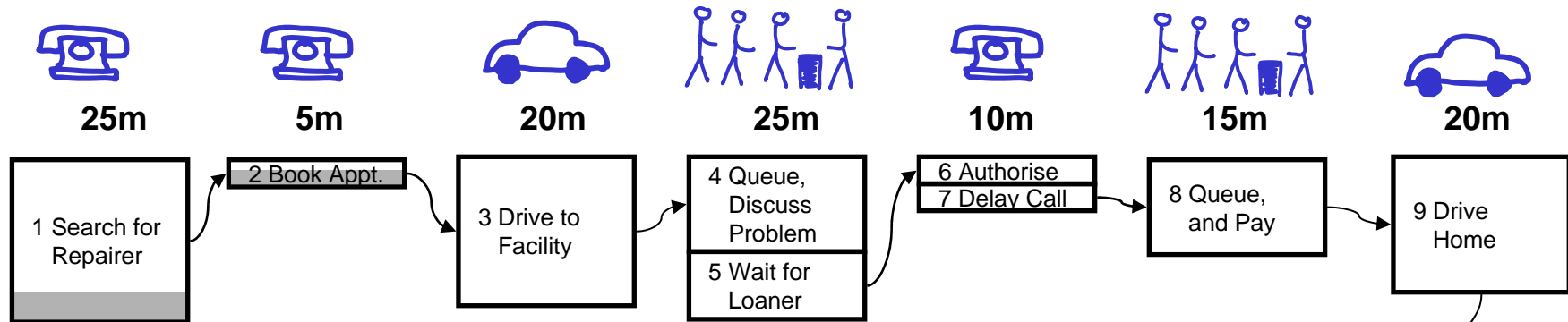
Our Issues

- We spent several years learning how to spread lean to every type of business - as it is now doing very fast
- We are building a global network of non-profit institutes to write down, teach and disseminate lean
- Much of the focus to date has been on **learning to see processes** and on **eliminating waste**
- But we became convinced that lean has to start by **defining value** from the customer perspective
- So we asked what **lean consumption** would look like as the complement to lean production & supply chains

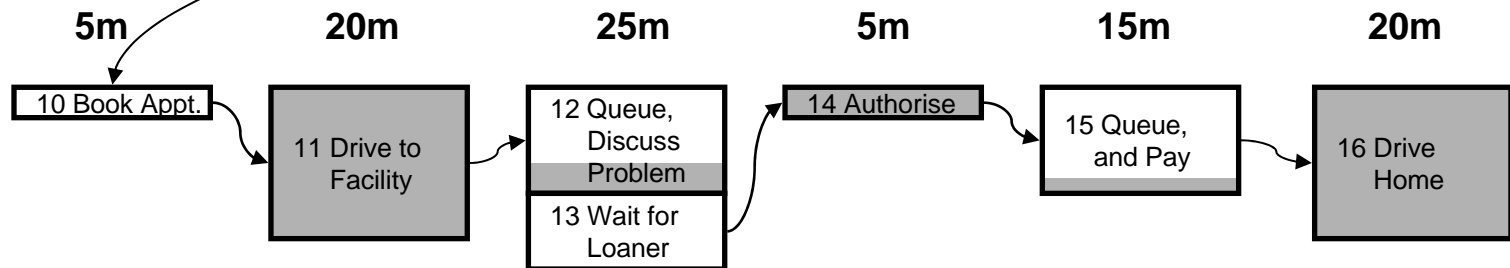
Our Proposition

- ECR has been talking a lot about the consumer – but has not found a way to include them in the process
- We think that the way forward is to apply the same lean process thinking to consumption
- To learn to see consumption not as an isolated transaction between strangers but as an **ongoing process for solving consumer problems**
- To see win-win opportunities for collaboration between consumers and providers to save time & money together
- We are all consumers and providers - and our households are mini businesses – which we manage!

The Car Service



Second Visit



Box Score

Consumers Time 210 minutes
 Value Creating Time 58 minutes
 Value/Total Time 28%

2005

Consumption take a lot of time, does not work very well and involves many frustrating interactions

Is this Typical?

- The custom built computer that fails to work with
- The medical procedure that takes many calls, trips and lots of queues
- The business trip full of queues, handoffs and delays
- The long drive to the “big box” retail store without finding the one item we actually wanted
- The exasperation of “help desks” and “service centres” that neither help or support

Yes! While products got better and cheaper – consumption did not! And it takes a lot of time!

Broken Provision Processes

- Growing spending on “new” products, features and options that fail to attract new customers
- Growing spending to increase customer loyalty as customers become less loyal
- High levels of out of stocks, lost sales and remaindering
- Larger investments in bigger assets which have a shrinking ability to create competitive advantage
- Outsourcing customer support so direct contact with the consumer is lost
- Employee dissatisfaction and high staff turnover

Pressures on Consumers

- Mass customisation has added to our **choices**
- The end of regulation has extended the number of things we have to make **choices** about
- The self-service economy enables us to buy more **personal capital goods** to replace services
- Two-income and single-parent households have **less time** to manage consumption
- Ageing households have more time - but **less energy**
- The internet is blurring the distinction between production and consumption – and has widened our potential **supply base** to the whole world

The Consumer's Dilemma

We all have more and more **choices** to make
and more and more products to manage –

but less **time** and **energy** to do so

This situation creates a major opportunity for
providers -

through **win-win** collaboration with consumers

New Way to Think about Consumption & Provision

- Quality does not cost more – neither should convenience
- Even for the same consumer, there is no one best way – the one format (the Big Box) that must fit all
- The end of the age of the Big Box (and Mass Consumption) does not mean the end of the big firm (retailer or supplier)
- Indeed big firms will win, as big retailers reduce the number of supplies and serve all formats from an integrated fulfilment system tied tightly to suppliers, at nearly the same cost per item in every format

Principles of Lean Consumption

1. **Solve the consumer's problem** completely by making sure all the elements work together to do so
2. Don't **waste** the consumer's (or the provider's) **time**
3. Provide exactly **what** the consumer wants
4. Provide value **where** it's wanted
5. Provide value **when** it's wanted
6. Continually **aggregate solutions** to reduce the consumer's time and hassle

Let's take each one in turn – illustrating with examples

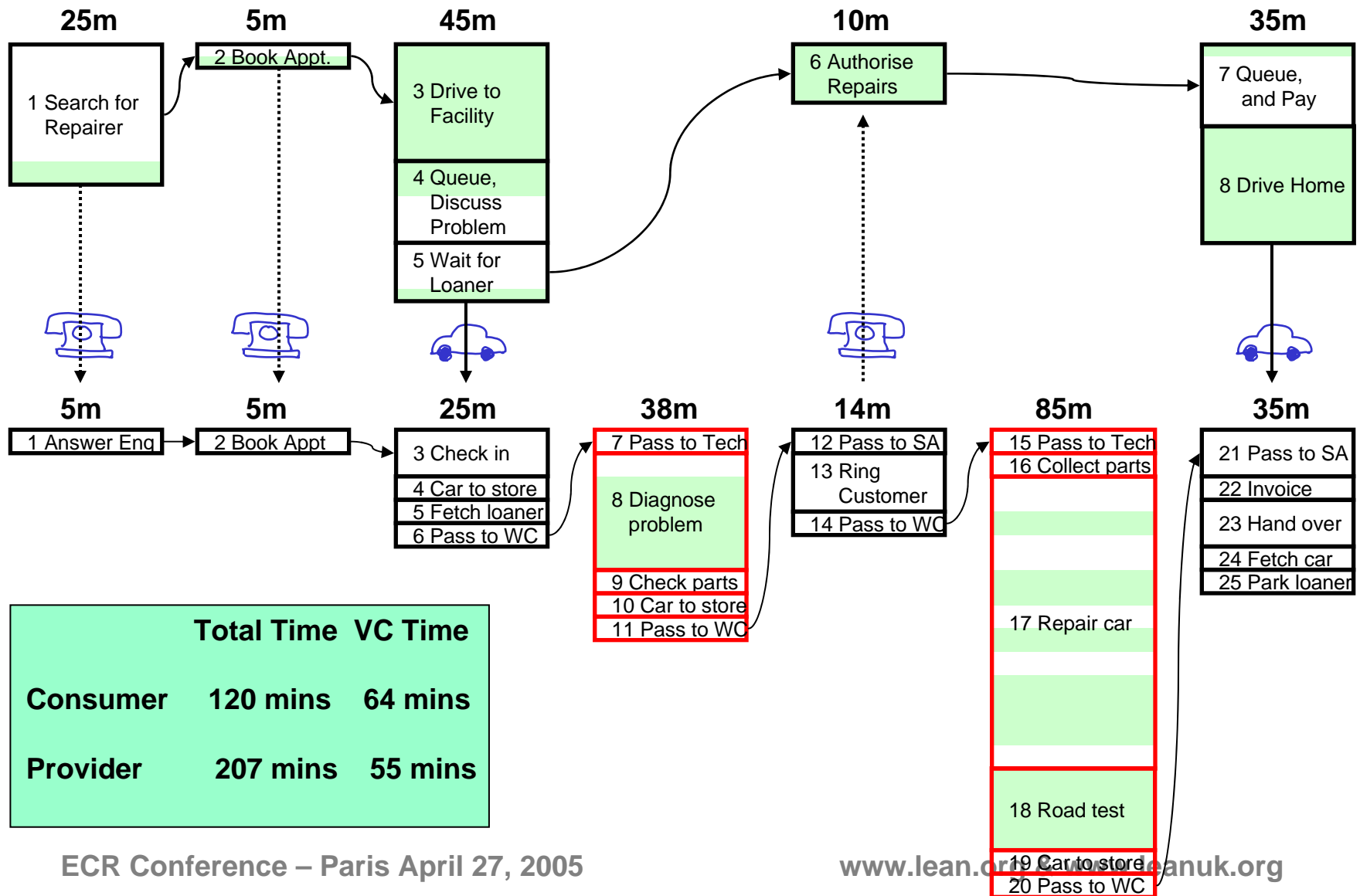
Solve Consumer Problems

- It is not the object consumers buy but the **use** they get from the object or service – in relation to its context
- Has it solved the problem completely? What were they trying to do? What else did they have to do to solve the problem completely? Was that a hassle?
- Fujitsu Services reversed the logic of outsourced customer service and technical support – getting **experienced staff** to ask about customer purpose, offer a fix, redesign to eliminate the root cause and discover additional value for future products
- We need a dialogue to discover **purpose** and **hassle**

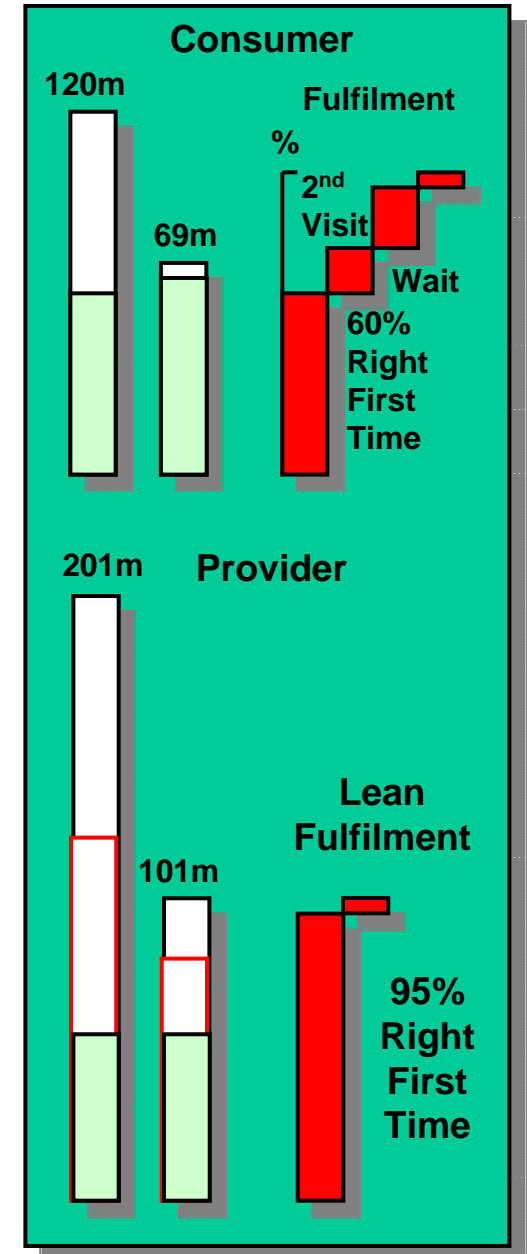
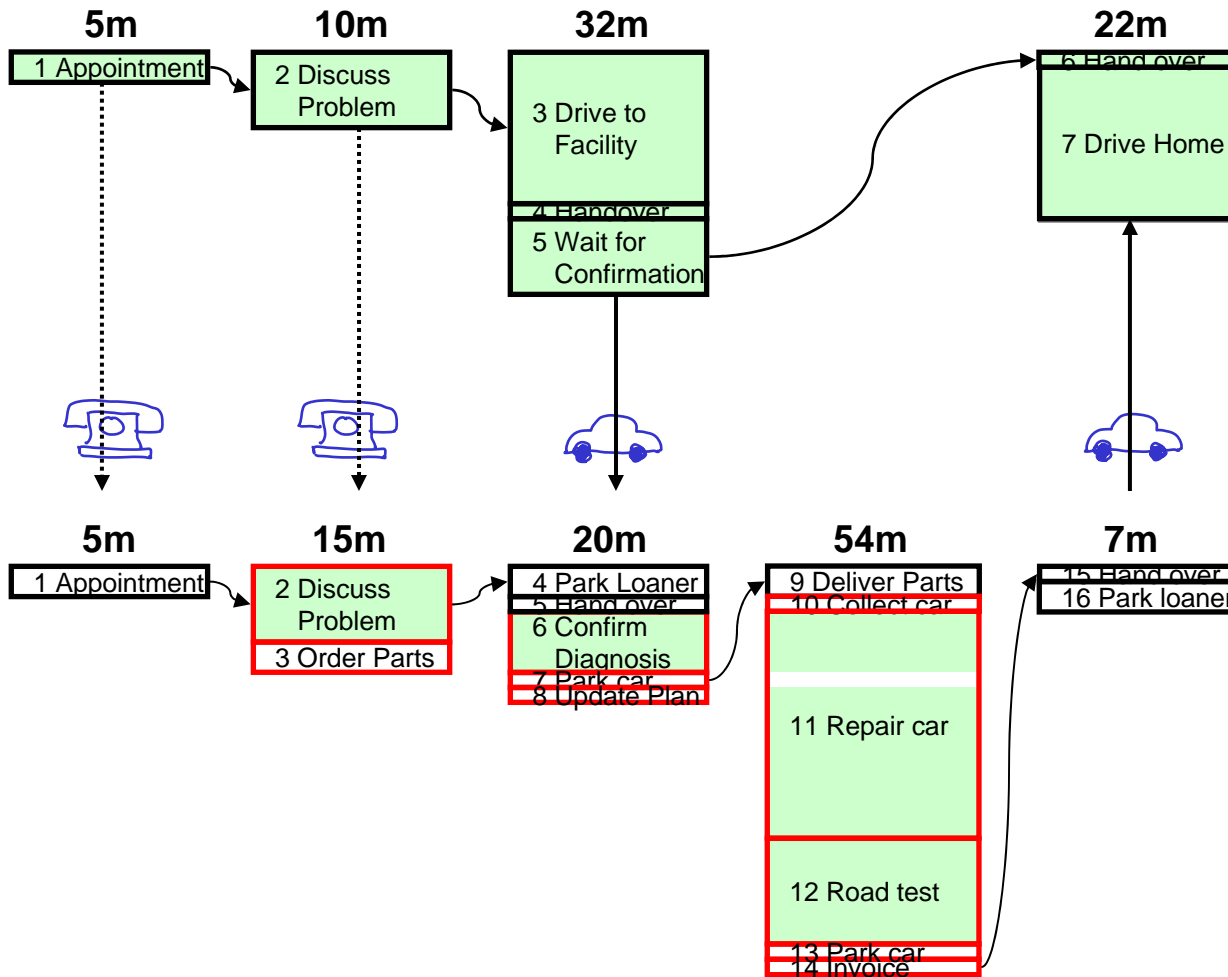
Don't Waste my Time

- The assumption is “the consumer’s time is free” – so consumers should do more of the work!
- In reality, both customer’s and provider’s time is wasted by poorly designed and disconnected consumption and provision processes
- Mapping both processes and their interactions reveals this **wasted time and cost** and identifies opportunities for **win-win collaboration** to cut time and cost for both
- By creating a dialogue with consumers to pre-diagnose the problem, planning and preparing, separating job types and creating standardised lean processes

Car Repair



Lean Car Repair



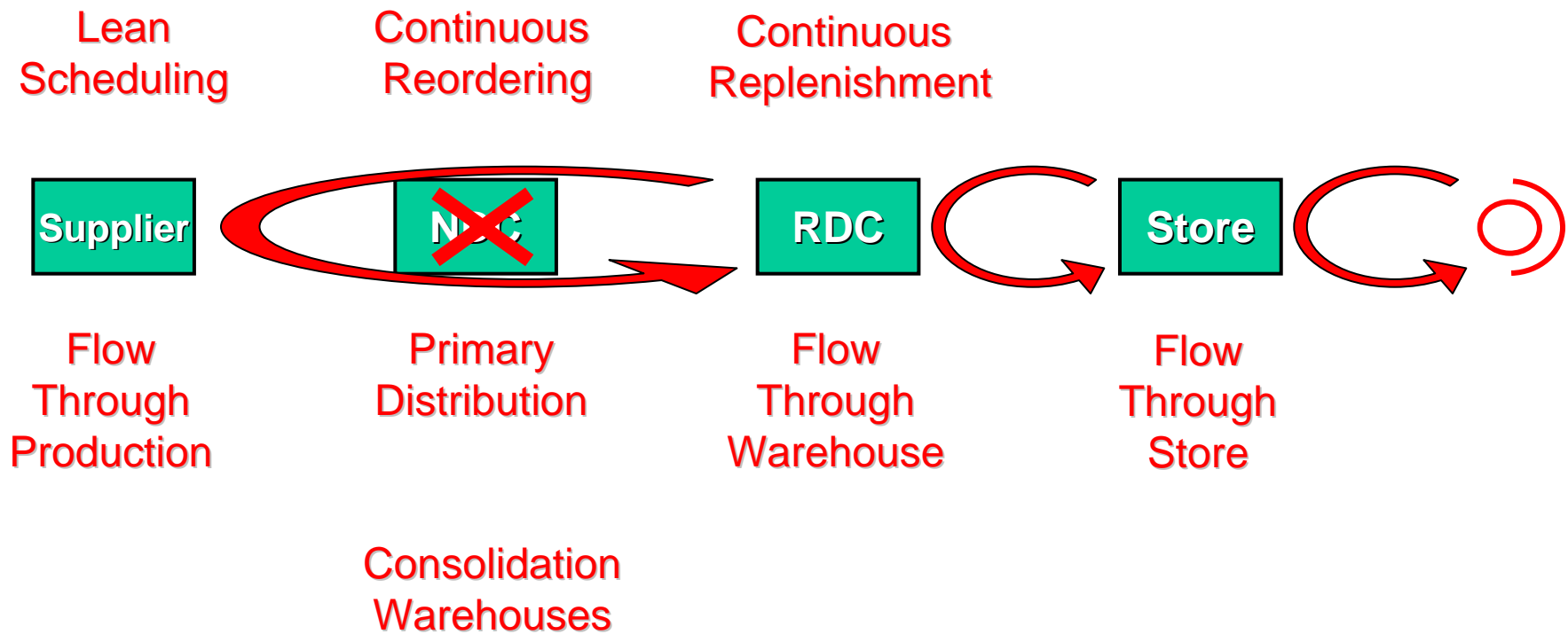
What Consumers Want

- Fulfilment levels lower than we think in most systems:-
 - 98.5% availability drops to 92% on the shelf and **55%** for a basket of 40 items in the grocery store
 - **80%** availability for the shoe with 150 day order window leads to 40% being remaindered
 - **52%** of consumers get the cars they wanted on time and **64%** of service jobs are completed RFTOT
- Better IT, RFID and stocks are not the answer – but **rapid, reflexive, replenishment** loops back upstream
- And **compressing** the length of the supply chain

Toyota's Supply Chains

- Toyota spent 30 years developing lean in house and spreading it up and down its supply chain
- The most impressive example is their **aftermarket parts** distribution system – supplying 500,000 SKUs to dealers
- It operates as a series of tight replenishment loops – dealers call off parts from Distribution Centres every day – these shipments trigger daily orders to be picked up from suppliers the next day – most of whom can also make every part that is required in a day every day
- The result is the **highest availability, lowest stock levels** and the **smoothest order signals**

Lean in Grocery So Far



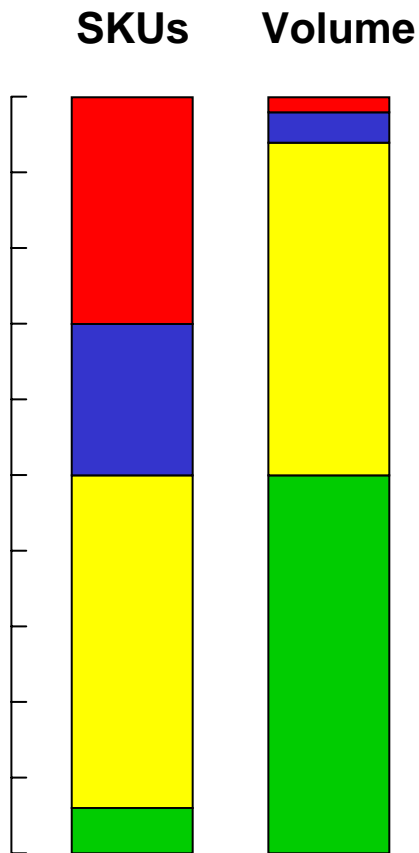
Rapid, Reflexive Replenishment

- Toyota distinguish between **cognitive** and **reflexive pull** systems
- Which separates capacity and materials planning from production and shipping instructions
- Rapid, reflexive replenishment is based on four key principles:-
 - Only one **scheduling point** or pacemaker
 - Greatly increased **frequency** of replenishment
 - Replenish only **exactly** what was sold
 - Where possible **compress** the value stream
- The objective is to optimise the flow not each asset

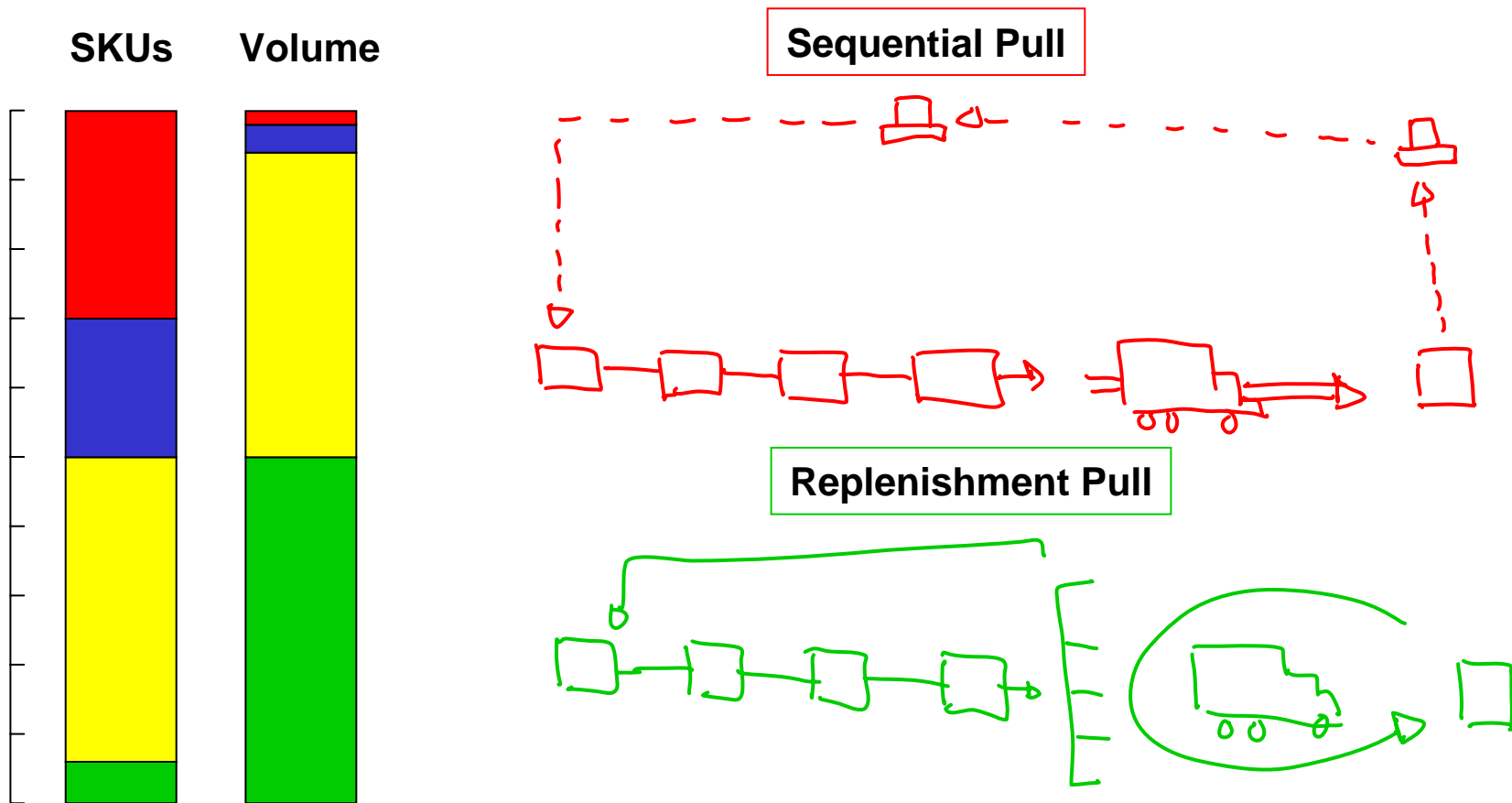
Many Process Industries

- Are stuck in the world of **short term plan changes**
- And a need to respond **flexibly** to demands from customers
- Actually they are caught in a vicious circle – data errors, forecast errors, demand amplification, constant rescheduling, expediting, loss of capacity, finished goods shortages and excess stocks etc.
- The breakthrough is to see where you can flow and **create stability** and build on that to achieve increased **responsiveness** to demand

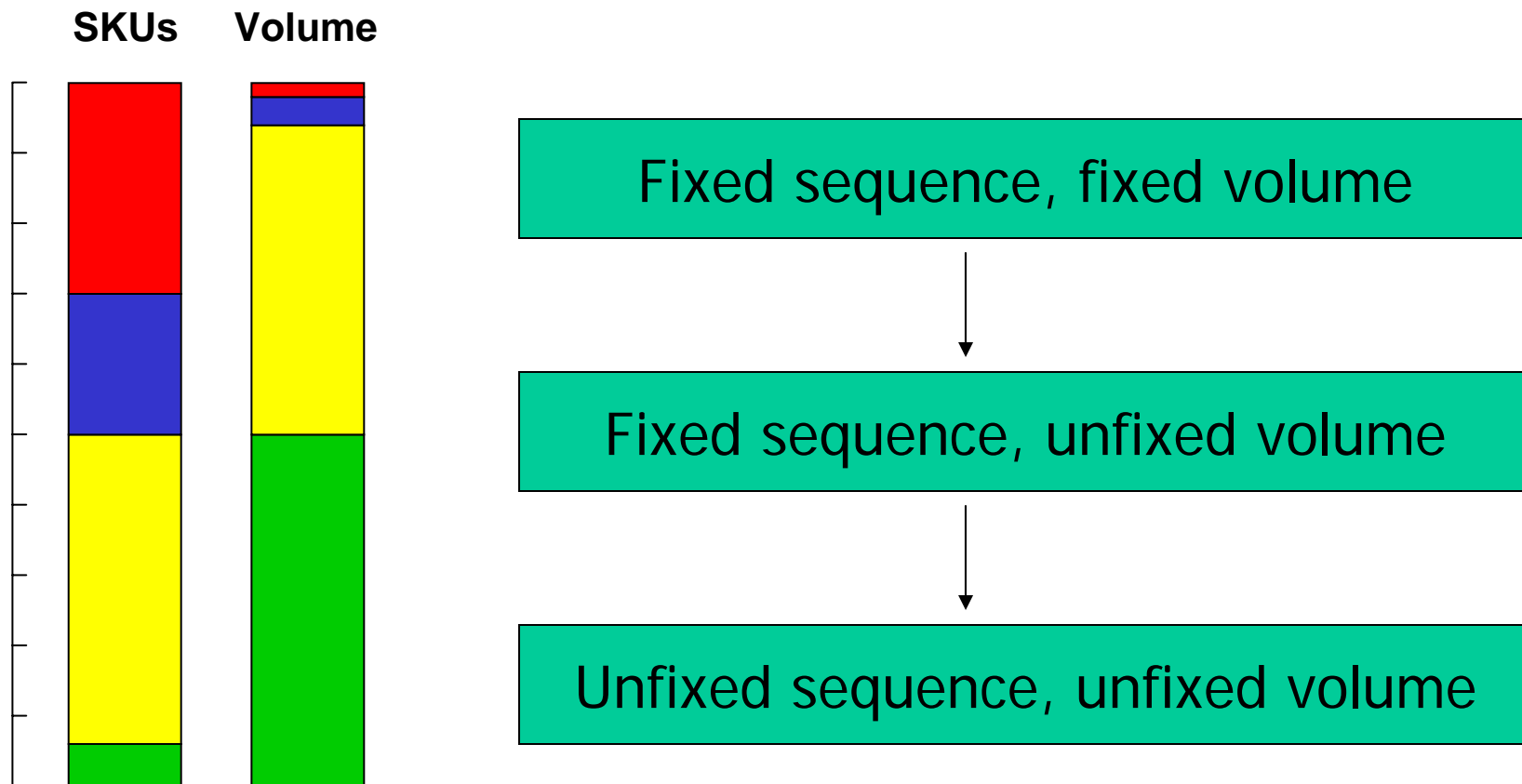
Where and How to Flow?



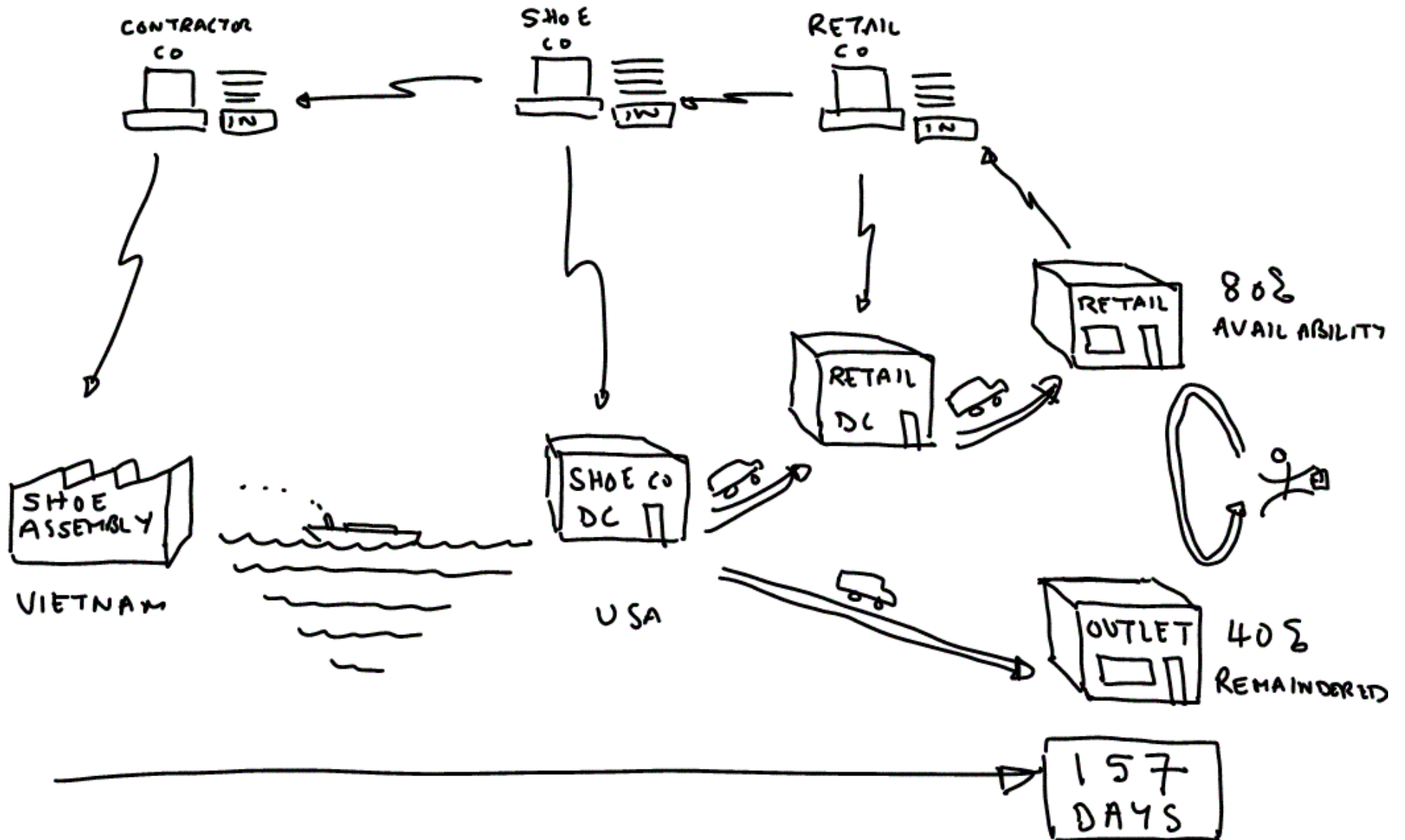
Where and How to Flow?



Progression over time

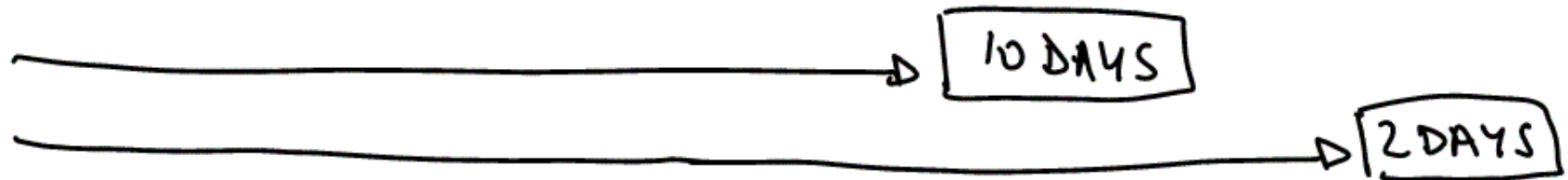
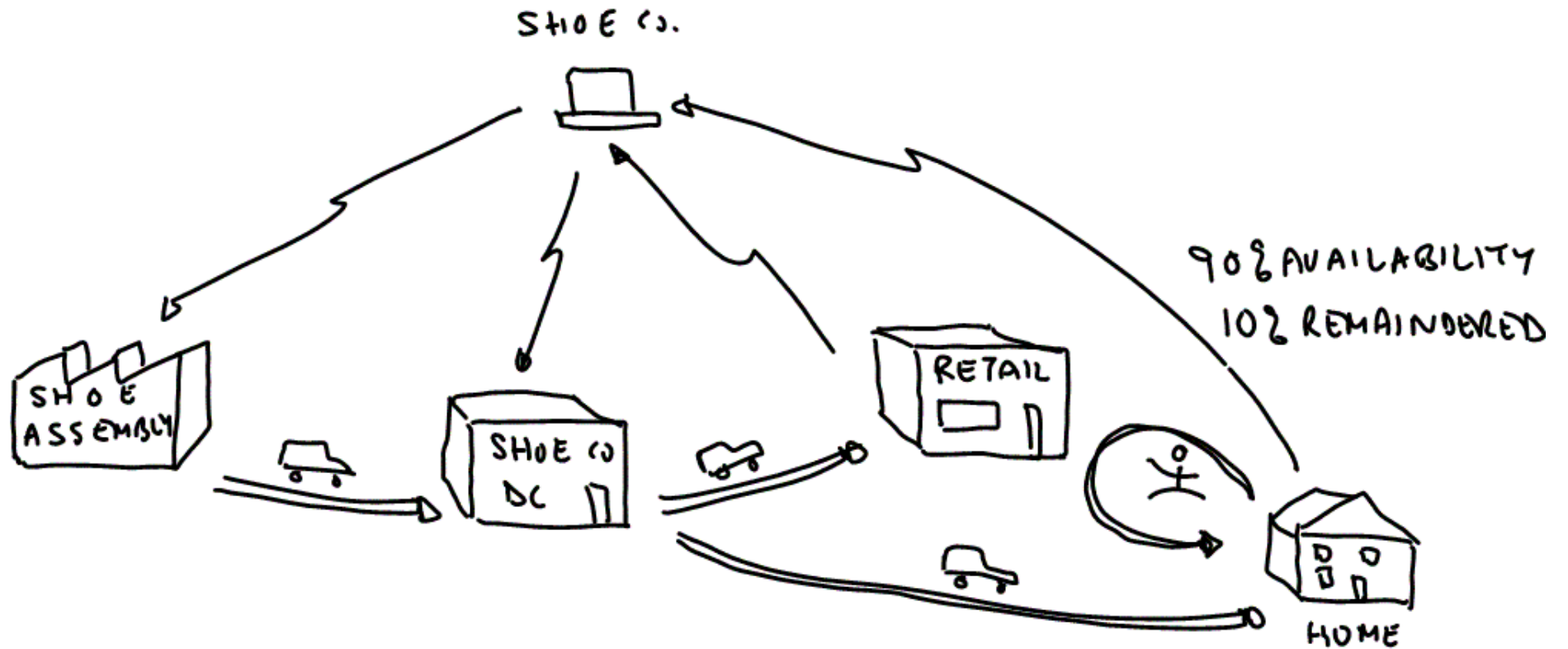


SHOE CURRENT STATE



DTJ 18/5/04

SHOE FUTURE STATE



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The Logic of Location

- In this case value stream compression eliminates storage at the plant, and at the container port, customs delays, storage in DC, the entire cost of the store, overstocks, lost sales and remaindering – as direct touch labour is only a tiny fraction of total costs
- Make **customised products close** to customers and make **standard products within the region of sale** – using trucks – not boats that always lead to planes
- No one has an adequate cost of location model across functions to make these decisions

Where Consumers Want Value

	Total Time	Travel Cost	Product Cost
Hypermarket 	195 m	\$12.00	Low
Discount Store 	160m	\$12.00	V Low
Supermarket 	95m	\$5.00	Low
Retail Shop 	50m	\$4.00	Medium
Convenience Store 	15m	-----	High
Home Shopping 	25m + Delay	-----	Low + Delivery

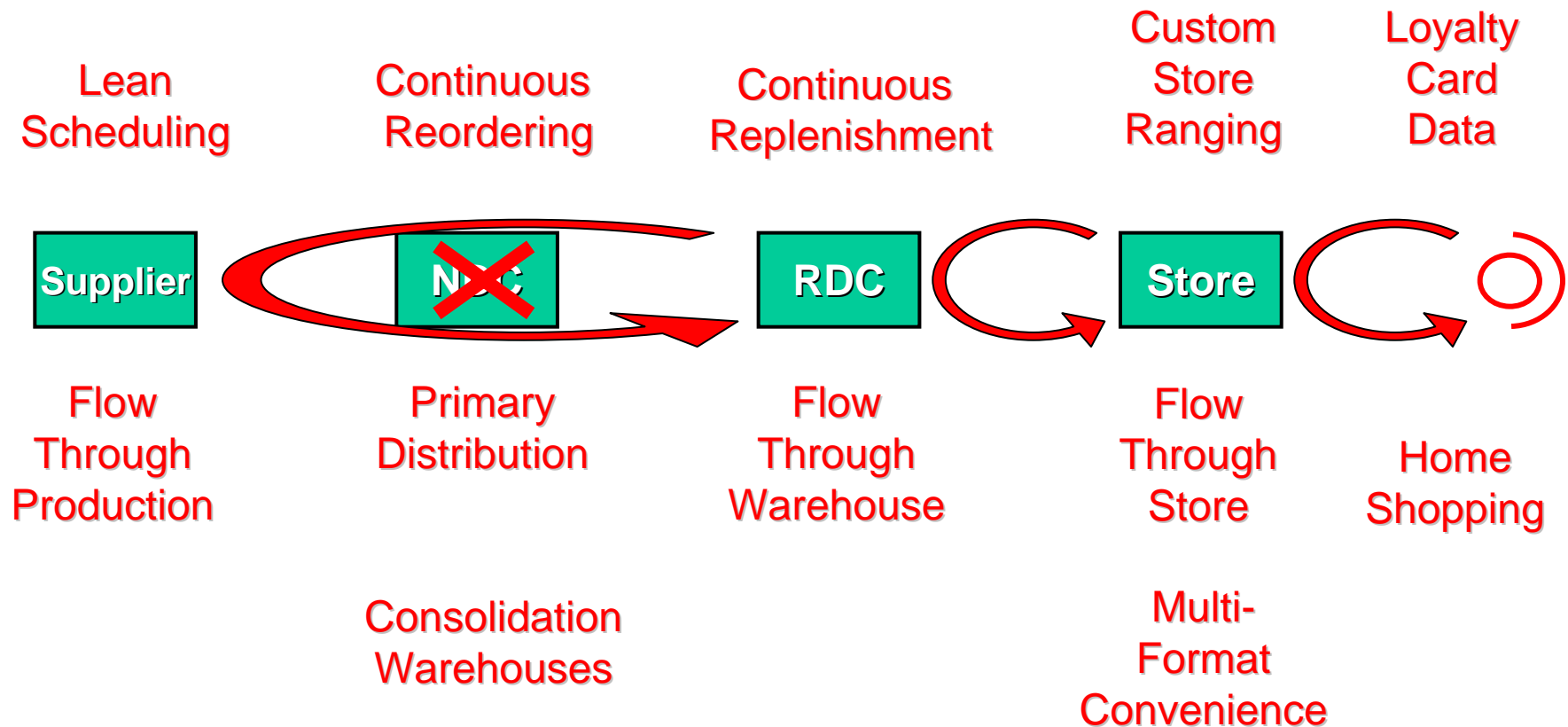
Which is actually the cheapest?

Is the price v. variety v. time trade-off inevitable?

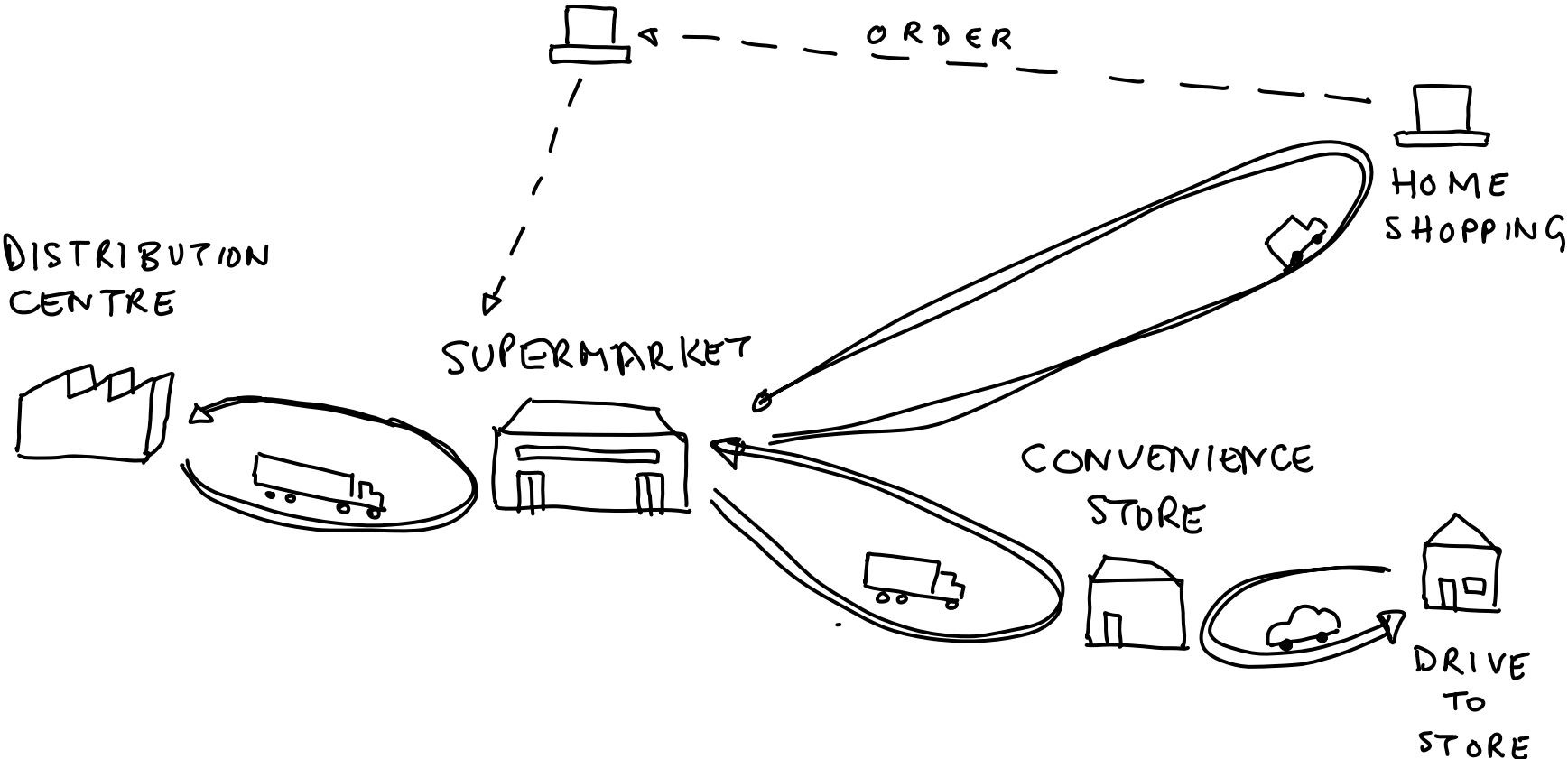
The Keys to Convenience

- Tesco has triggered the convenience store revolution in the UK – and others are following
- The key is to have a common rapid replenishment **fulfilment system** – based on smaller small pack sizes
- That uses spare capacity in stores to pick small orders
- And running “water spider” replenishment systems to local stores and consumer’s homes
- Add to this knowledge of what local consumers want
- It should be possible to give consumers cost competitive and convenient access in **every format** to the **full range** available in the largest stores

Lean in Grocery So Far



Replenishment Loops



When Consumers Want Value

- Is everything purchased on impulse? No! But is there any incentive to plan ahead in current retailing? No!
- To deal with this, production must either be infinitely flexible or we have to dispose of unwanted stock
- Reversing this logic – How can providers **plan ahead** with consumers while offering price incentives to **smooth the demand** for production slots?
- This stability creates the possibility of responding to the “got-to-have-it-now” consumers at much lower cost
- This realistically takes us beyond “build to order”

Aggregate Solutions

- Lean producers are **decreasing** the number of suppliers, each with a deeper knowledge to solve bigger problems on a continuing basis
- Why are consumers (and retailers) **increasing** the number of suppliers – often one-off strangers – to acquire the elements of the solution to their problems?
- Why can't someone provide **continuing solutions** to integrate the elements to solve consumers' big problems: communications, mobility, shelter, healthcare, financial management, and routine shopping?

Two Kinds of Shopping

- **Experiential** for the categories and items we enjoy spending time selecting
- **Instrumental** (routine) for the many categories and items we need to solve life's repetitive problems
- Why can't one provider – a “water spider to the world” – solve all of the consumer's instrumental shopping problems with frequent deliveries at attractive cost of just the items needed?
- Why do consumers need to go “stores” at all for most instrumental shopping?

Mass Versus Lean

We are moving beyond the era of **Mass Consumption** in which one format fits all at ever higher scale – bigger boxes – as ever increasing variety is substituted for true customer desire

To a world of **Lean Consumption** in which consumption and provision become a shared process that is clearly visible to everyone and in which problems are jointly defined and resolved with minimum time and cost

Conclusions

- Consumers are under growing **time pressure**
- Current consumption processes are **full of waste** (so are provision processes)
- We know that quality does not cost more – we discover that convenience does **not cost more** either
- The “Big Box” will no longer be the dominant retail, distribution or production format
- It will give way to **multiple formats** offering greater convenience (local stores, pick-up points and home delivery) matching consumer circumstances rather than consumer attributes

Implications

- The key is treating consumers as **partners** and no longer as **strangers** – through dialogue with intelligent feedback
- And a common **fulfilment system** – optimising flows not assets – with rapid replenishment loops upstream and “water spider” routes to local stores and customer homes
- The scope for innovation in convenience formats is huge
- The scope for removing layers of cost by compressing supply chains is also huge
- Buying power suggests large players could lead the way – but challenged by innovative niche players

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