

PCUBED

Ingenuity Meets Implementation

Peter Wilson

Former Group CIO & Head Of Logistics

Programmes Inchcape plc

Merging Lean and PPPM to drive rapid business transformation

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Case Study

Systematically Adopting Lean To Deliver Radical Change In Toyota's Downstream Supply Chain

Agenda

- Business Background
- The Environment
- The Business Challenge
- Managing The Complexity
- A Blueprint for success

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The Business Background

- Toyota – the worlds most profitable automotive manufacturer – no. 3 in volume sales;
- Aggressive global growth strategy – geographic, demographic, environmental (unspoken desire to be #1)
- Leaders in 'lean' manufacturing encompassing its own manufacturing operations and its Tier 1 component suppliers;
- Customer satisfaction impacted by an inefficient downstream supply chain – Toyota, its distributors, logistics providers, retailers;
- Toyota lean methods were alien to the downstream community.

Historic Focus On Upstream Supply Chain



Tier 2



Tier 1



- Proximity/JIT
- Quality
- Synchronised
- Design For Manufacture
- Flexibility
- Fast Problem Resolution

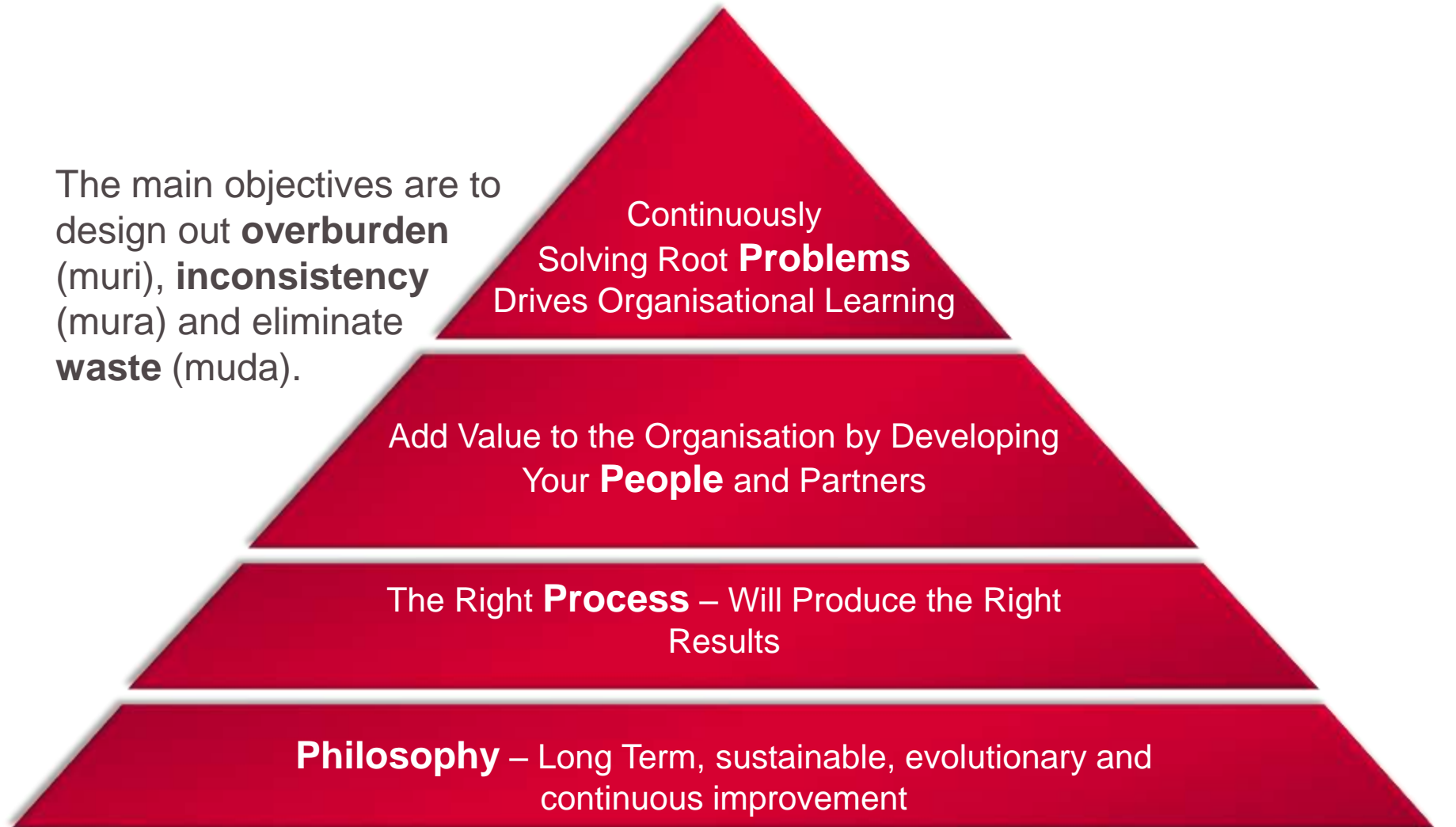
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- Background
- **The Environment**
 - **Philosophy**
 - **Principles**
 - **Methods and Tools**
- The Business Challenge
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The Lean Philosophy

Pervasive Framework for Managing Business Operations

The main objectives are to design out **overburden** (muri), **inconsistency** (mura) and eliminate **waste** (muda).



A Set Of Guiding Principles

Change Management Philosophy

- Long Term Philosophy
- Evolutionary
- Thorough evaluation/ Fast Implementation
- Collaboration With Partners

Organisation & People

- Effective Leadership
- Teamwork & Collaboration
- Learning Organisation
- Experience Operations

Quality Management

- Continuous Improvement – drive out waste
- Zero Defects – stop and fix
- Right first Time
- Visual Control

Process & Systems

- Demand driven (pull) systems
- Continuous process flow
- Workload balancing
- Standardisation
- Technology Demanded by users & Reliable

Methods And Tools

Problem Solving – driving stability

- Quality Improvement Process (QIP)
- A3 – structured problem solving
- Six Sigma
- FMEA's
- Control plans
- Poka-yoke
- Jidoka
- Visual controls

Organising for success

- Practice, Analyse, Learn, Teach
- Small focused teams, 4 to 5 people
- Supplier collaboration and partnership
- Learning organisation through relentless reflection

Identify and eliminate waste – waste reduction

- Value Stream Management
- Kaizen
- TPM – Total Preventative Maintenance
- OEE – asset utilisation
- Kanban
- Heijunka – workload levelling
- 5S
- SIPOC

Measuring success through metrics

- Enabler vs results
- PDCA – bringing the measures to life
- RASIC – driving accountability
- Standards – one version of the truth
- Definition change control
- Reporting consistency

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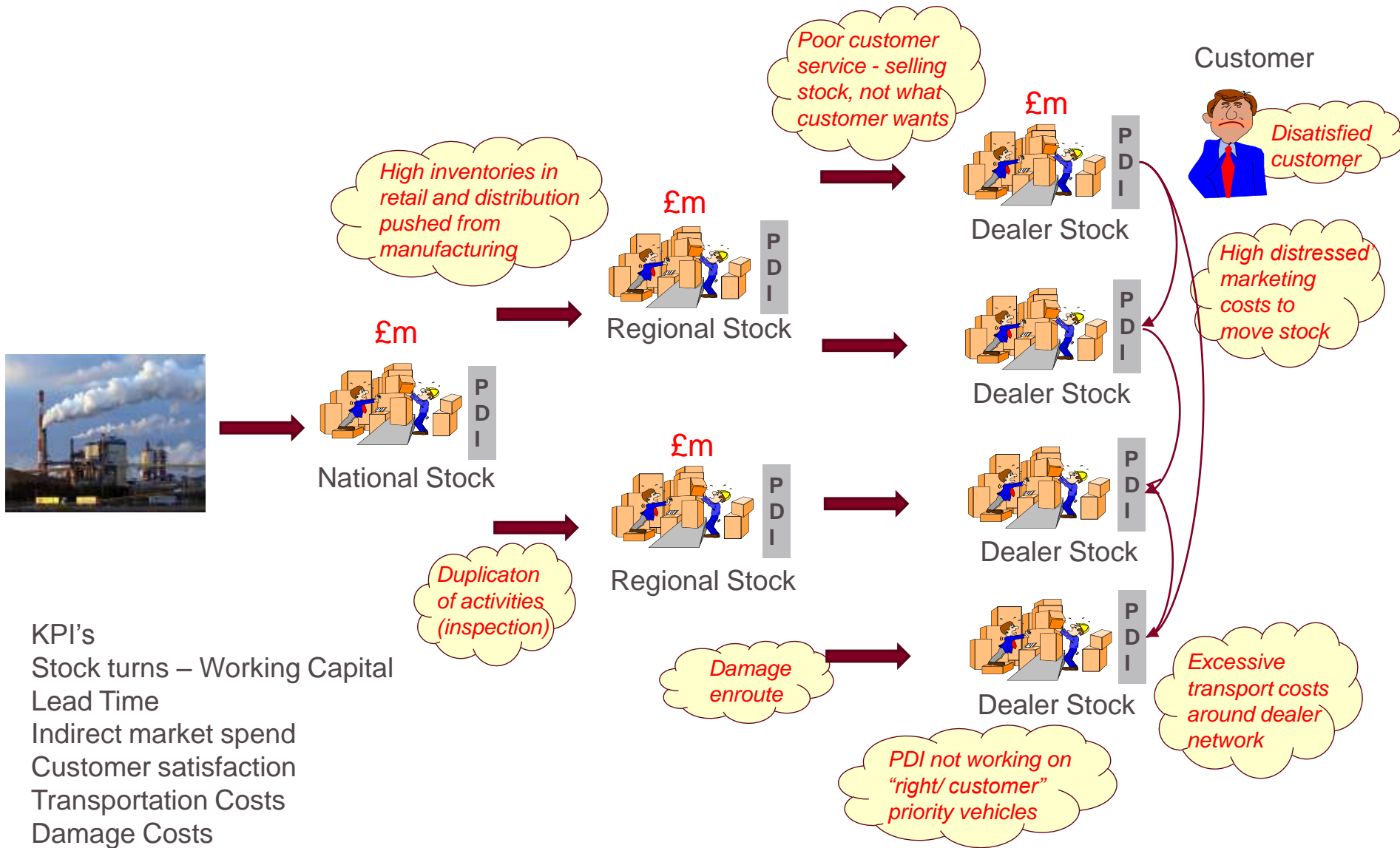
The Business Challenge – Dysfunctional Supply Chain Operations

The Existing Downstream Supply Chain Business Model represented historic industry norms **NOT** the Toyota way. Key Issues:

- **Silo Organisations:** numerous stakeholders had differing goals and objectives reflecting their individual needs, partner integration was low to non-existent.
- **Complex Operations:** diverse product range, non-integrated processes and systems; complex network of operations.
- **Competing Objectives:**
 - factories flat out vs low stocks
 - sell more vs satisfied customers,
 - more profit vs more marketing spend.
 - Reduce costs vs invest in logistics activities
- **Short Term Financial Impact:** production slow down
- **Poor Visibility of Performance:** no common metrics



Traditional 'Downstream' Supply Chain



- KPI's
- Stock turns – Working Capital
 - Lead Time
 - Indirect market spend
 - Customer satisfaction
 - Transportation Costs
 - Damage Costs

The Business Challenge

How to transform dysfunctional downstream operations and stakeholders into a world class supply chain, significantly improving customer satisfaction and profitability for (most) stakeholders.

The \$64m Question

Could the long term continuous improvement approach meet the business challenge and manage radical change in the desired timescales.

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Managing The Complexity

Set Clear Objectives That 'Framed' The Programme

- **Vision:** Create a comprehensive view of the vision
- **Leadership:** Driven from the top but buy-in and leadership from all levels of management
- **Communication:** Meaningful communication throughout
- **Benefits:** Clearly understand the benefits for all stakeholders
- **Metrics:** Develop simple metrics that predict and monitor success
- **Organisation:** Organise for success
- **Training:** Comprehensive training in new processes and systems
- **Robust Technology:** Ensure technology works

Create a comprehensive view of the vision

The New Paradigm

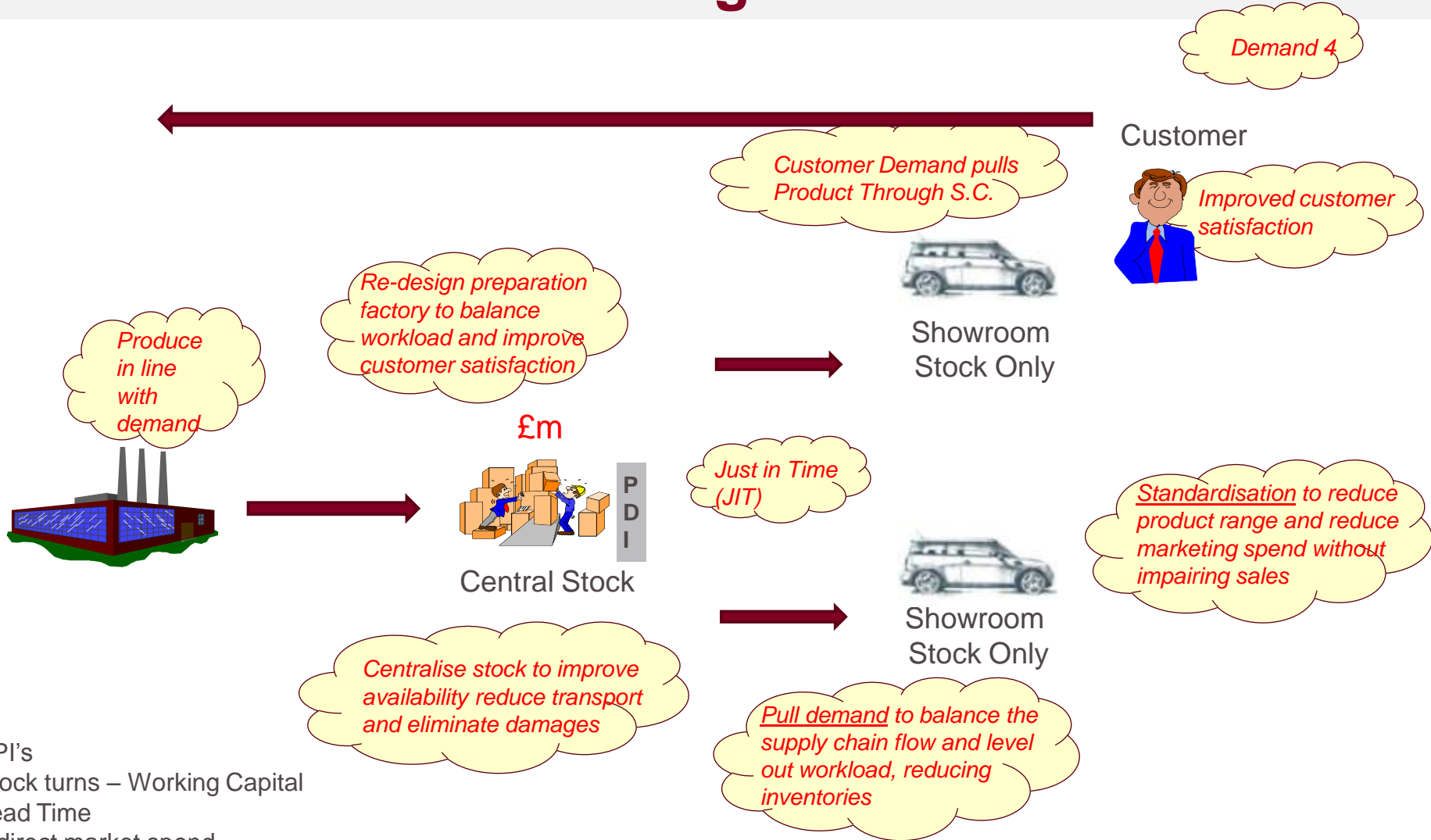
- Reduce Product range
- Customer Demand Drives All activity
- Restructure stocking points and logistics Network
- Integrated Planning Process
- Integrated Information systems
- Clearly Defined KPI's
- Re-define reward systems – understand what's in it for me at all levels

Lean Principle Used

- Reduce variability and balance all operations
- Pull product based on customer demand
- Continuous flow
- Eliminate non-value add operations
- End To End visibility
- Visual Controls
- Partnerships and co-operation



Customer Orientated Logistics



- KPI's
- Stock turns – Working Capital
- Lead Time
- Indirect market spend
- Customer satisfaction
- Transportation Costs
- Damage Costs

Business Benefits – a few critical KPI's

KPI's

Improvement

Stock Turns

4 months to 6 weeks

Lead Time

4 months to 6 weeks

Indirect Marketing Spend

Reduced by 70%

Customer Satisfaction

Improved 5% points

Transportation Costs

Reduced by 60%

Repair Costs

Reduce by 70%

**Bring These To Life:
Visible, reviewed, acted upon,
competitive**



Organise For Success

Understand The Nature Of The Change

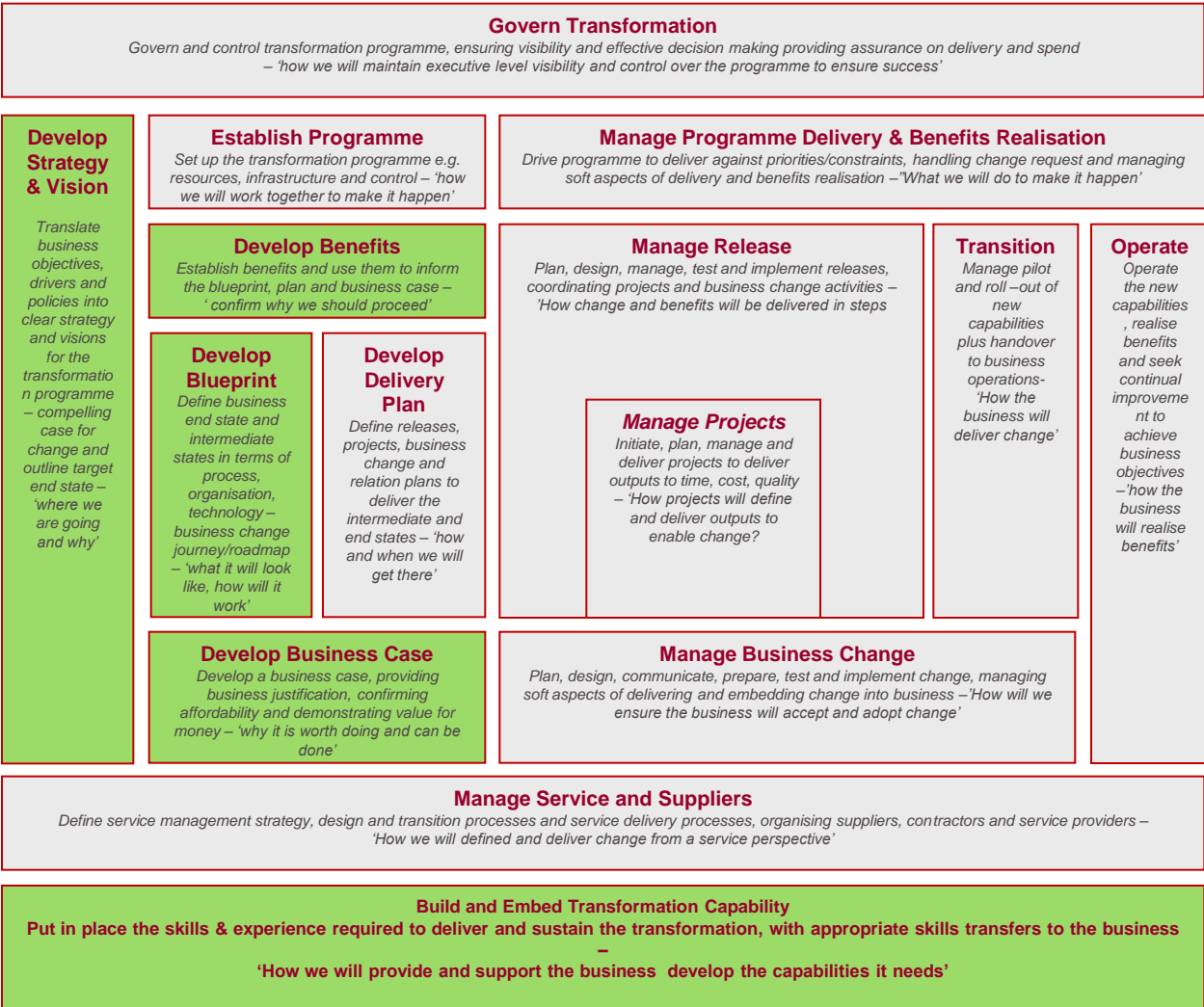
■ Radical Change

- Create the vision
- Time constrained urgency
- Formal change (programme) organisation
- Large Scale – budgets (capex) required
- Highly Structured
- Rigorous Governance
- Strong Administration – PMO
- Meeting Cadence
- Disciplined reporting

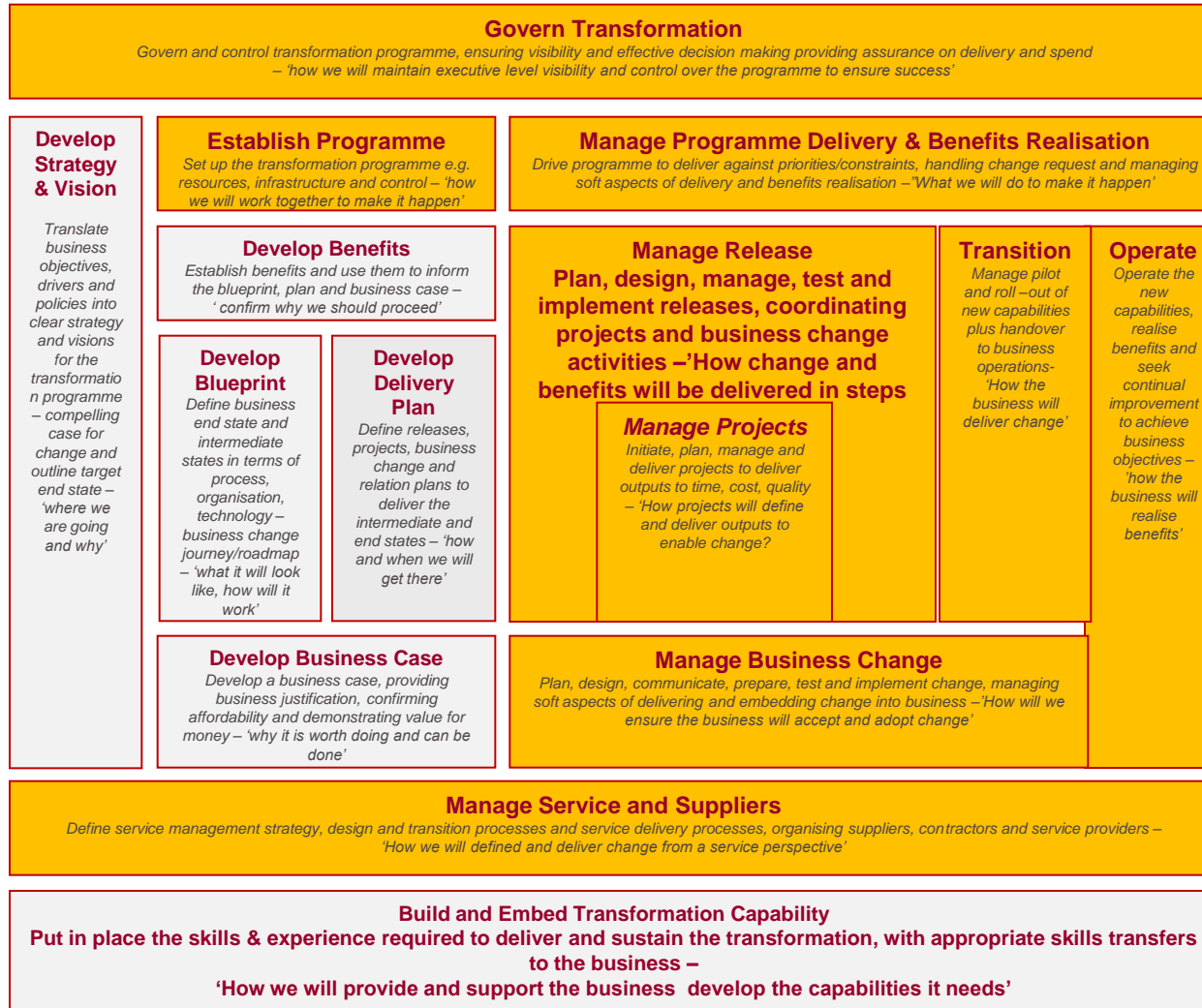
■ Evolutionary (Lean) Change

- Create the vision
- Time scales internally driven
- Smaller scale – benefit driven budget
- Generic change organisation
- Loosely structured
- Governance more ad hoc
- Administration – maybe
- Meeting cadence
- Reporting integrated within operations

Radical Change: Requires Disciplined Programme/ Project management



Radical Change: Requires Disciplined Programme/ Project management



Organising for Success – Key Components

- Driven from the top – buy in from all levels of management
- Get senior management involved in the change:
 - go and find out
 - lead the communication
- Building the delivery capability
- Spanning the functional silos – organising to take an end-to-end view of the business
- Reflect the scale and nature of the change – e.g. radical vs evolutionary



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A Blueprint For Success – PPPM and Lean

Philosophy – Principles - Tools

Build A Detailed, Clear Vision – create a winning paradigm

Strong Leadership from All Levels Of Management

Understand the benefits up front and how stakeholders will be rewarded – use KPI's to keep alive post implementation

Organise for success – utilise appropriate approaches and methods (lean/ six sigma) under the umbrella of disciplined programme management

Communicate Before, During and After

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For more information, please visit www.pcubed.com