

Top tips for Complexity Management

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Vice President Capability Development, Be4ward Ltd

- assisting a number of Pharmaceutical clients with packaging management related engagements.

2001 to 2009: Global head of pharmaceutical packaging for GlaxoSmithKline, responsible for:

- Structural design, artwork and creative services, packaging legislation, complexity reduction, technical capability development and packaging supplier base development
- Led Global Pack Management Project, a £25m re-engineering of GSK's product change management capability.
- Established GSK's global packing design capability to drive product standardisation, legislative compliance, effective packaging support to product launch and the company's capabilities to manage SKU portfolios
- Led definition of GSK's strategy for serialisation, authentication, anti-counterfeiting and product coding.
- Led development of GSK's Global Packaging Strategy, defining global supply chain strategies for each product dose form, standardising packaging equipment, components and SKUs

Prior: GSK and specialty chemical industry in various supply chain and operational roles

- Experiences in merger integration, supply chain process and systems implementation, product acquisition and divestment, lean and six sigma deployment, and operational management.

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Top tips for complexity management

Why is complexity increasing in the pharma market?

Techniques for dealing with packaging complexity

Implications for your artwork operations



Managing complexity is easy...



If only it was that simple...unfortunately there is no golden bullet.

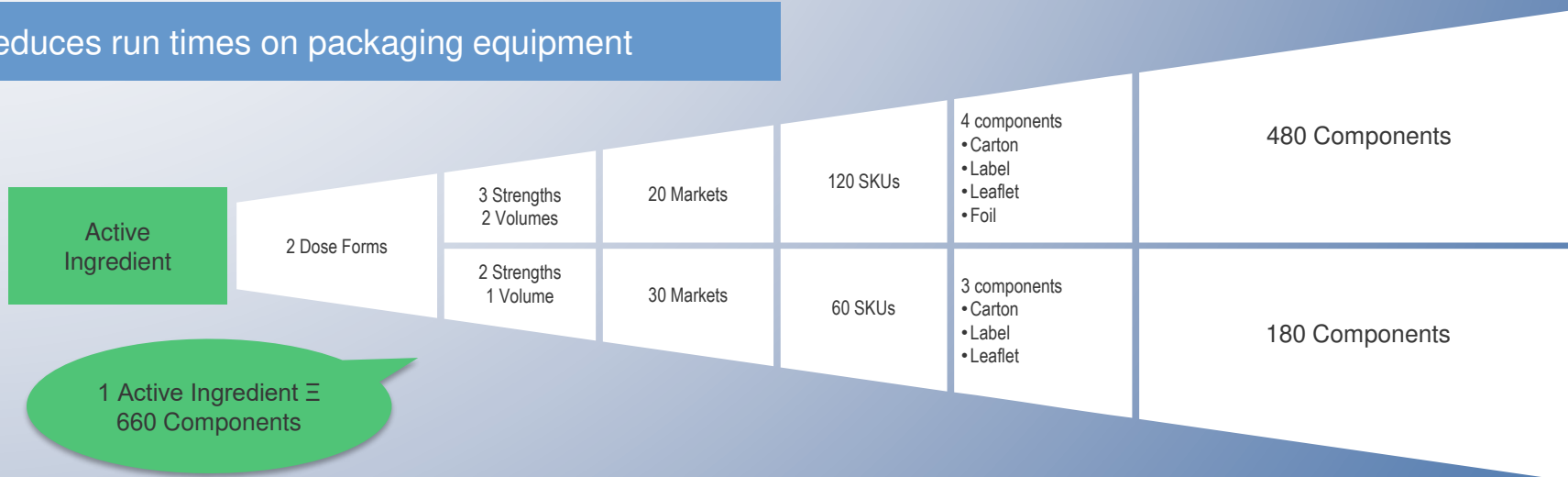
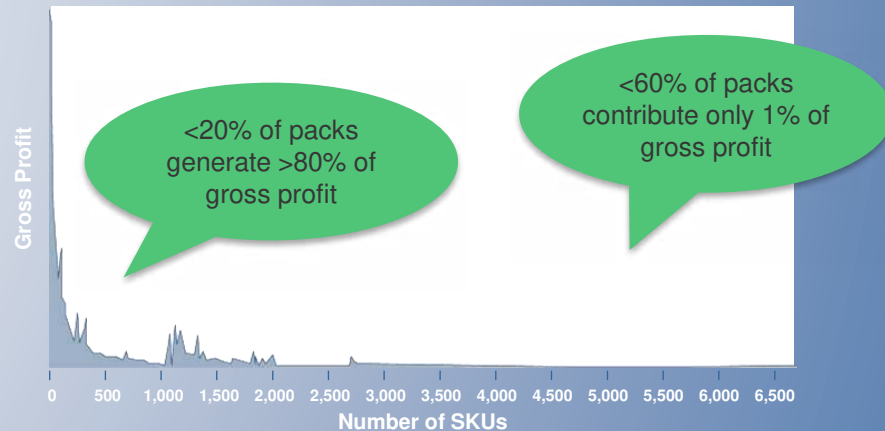
What is packaging complexity?

Product portfolios are expanding

Resulting in an explosion of packaging components

Creates significant hidden factory to manage

Reduces run times on packaging equipment



How many of your products sell less than 10,000 packs per year?
That is sales of less than 30 packs per day.

Why does packaging complexity occur?

INTERNAL DRIVERS

MARKET EXPANSION

- Increasing number of country specific labels
- More SKUs

NEW PRODUCTS, DEVICES AND LINE EXTENSIONS

- Additional products driving more labelling requirements
- More SKUs

INCORPORATE NEW SUPPLY CHAIN SCENARIOS — PARTNERS, ACQUISITIONS, JVs

- Evolution of deals to maximise opportunity
- Increasing number of country specific labels
- More SKUs

Increasing Packaging Complexity

- Greater volumes of changes, information managed, people involved and drivers for change
- A growing portfolio of smaller volume products requiring advances in replenishment techniques
- Greater enablement of third parties
- More demanding internal and external environments
- Compliance, cost and speed....

EXTERNAL DRIVERS

PACKAGING LEGISLATION

Increasing levels of legislation are impacting the physical design of packaging

- Braille
- Openability
- Child resistance
- Readability
- Environment, waste, recycling

MARKET-SPECIFIC DEMANDS

- Market regulation remains a moving target at a country and regional level
- Regulators increasingly aware of artwork issues
- Temperature control
- Branding rules
- Serialisation/ Barcoding

COMPETITIVE PRESSURE

The market demands are increasing the pressure on supply of product

- Speed to launch
- COGs
- Working capital

All indications are that complexity will increase.

Complexity causes a number of issues

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1. Compliance issues

- Jurisdiction control
- Uncontrolled repacking

2. Lost commercial opportunities and product unavailability

- Supply cost vs. volume
- Stock outs

3. Manufacturing inefficiencies

4. Support function inefficiencies

- Regulatory, artwork, purchasing, warehousing, etc

5. Obsolescence

- Shelf life of finished packs
- Economic order quantity of components

All indications are that complexity will increase.

You can't avoid complexity in today's market place



It is the challenge of how to cope with GOOD complexity, whilst controlling BAD complexity.

Stage 1: understand your portfolio

3

Understand the product order profiles

- Runners, repeaters or strangers

2

Understand the portfolio of SKUs

- Descriptions: strength, dose form, volume, etc
- Component ranges
- Sales volumes
- Supplied to and from
- Point on product lifecycle

1

Understand the commercialisation strategy for the product/therapy

- What requirements are needed to effectively service the market?

Manage the sources of unnecessary complexity



Clear approval and control processes for portfolio additions ✓

Control brand variation ✓

Prune the portfolio regularly ✓

Control platform sizes ✓

Standardise layouts ✓

Minimise range of fonts, illustrations and graphical elements ✓

Share components or packs ✓

Bundle changes ✓

Remove all unnecessary or non-value added complexity.

Introduce capabilities to cope with necessary complexity

Manage order quantities of components and finished packs ✓

Postponement techniques ✓

Late customisation techniques ✓

Design your packaging to maximise opportunities to deal with complexity ✓

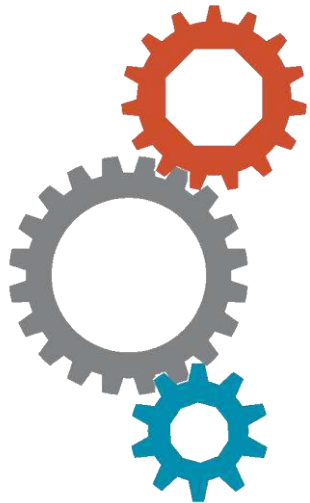
Build flexibility into equipment ✓

Speed up line changeovers ✓

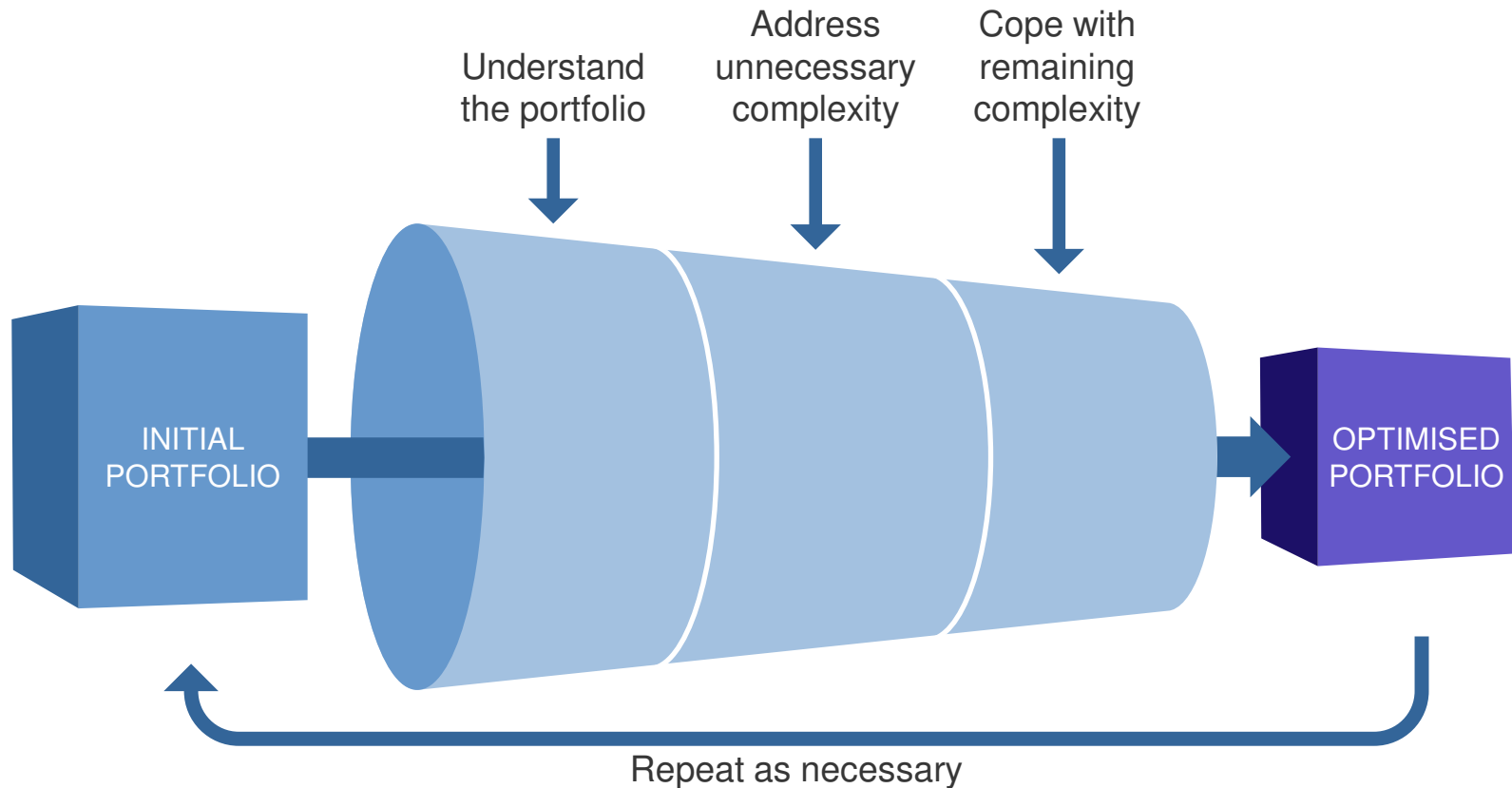
Supply Chain design and hubs ✓

Outsourcing ✓

Plan for future legislation ✓



There is a funnel approach to dealing with complexity



Routine reviews need to be build into your business cycles.

Impact on artwork operations

Increasing portfolio

More people/engagements

More locations/suppliers

New rules requiring new capabilities

- Increased volume of changes
- More projects to plan, expedite and control
- Increased risk
- Higher effort to train and maintain competency
- Need for standard processes and engagements
- Flexibility to deal with external partners processes
- Capability to introduce new requirements
- Increasing demand/opportunity for technology

Summary

- You are not special if you feel you have a packaging complexity burden
 - Happening all across Pharma
- There is no easy solution
- Requires application of multiple techniques and a mindset to control...
 - in an ever-changing environment,
 - involving many players.
- Need to be good at controlling complexity and coping with complexity
- Not responding will result in an increasing hidden factory and associated cost burden

THANK YOU

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