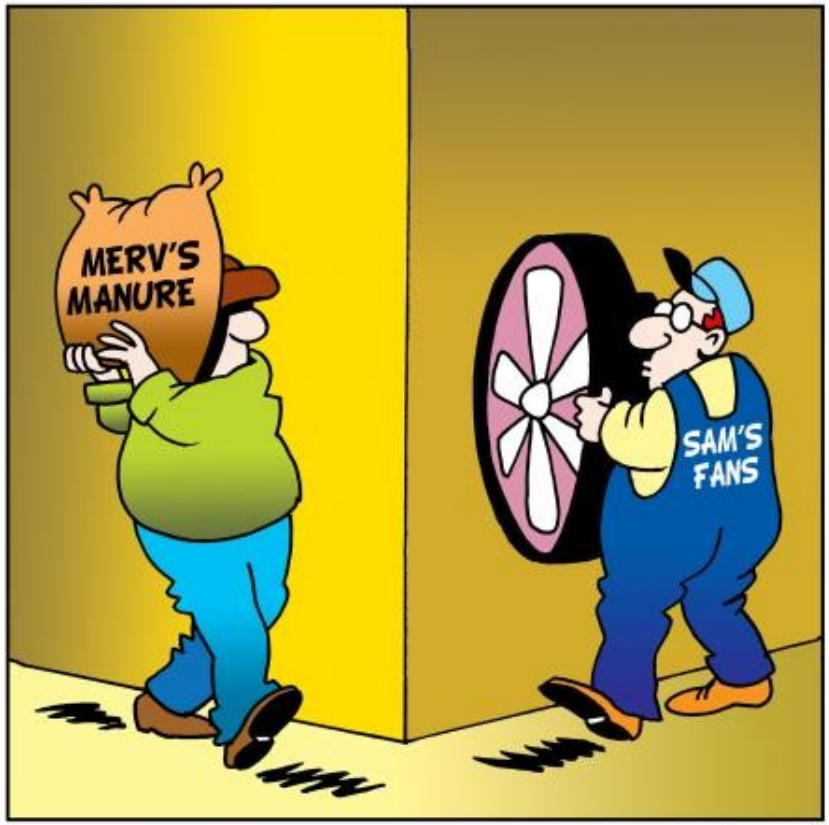
Value-adding without cost-adding: How to boost productivity in wineries

Nick Palousis, CEO, 2XE

What typically motivates change?



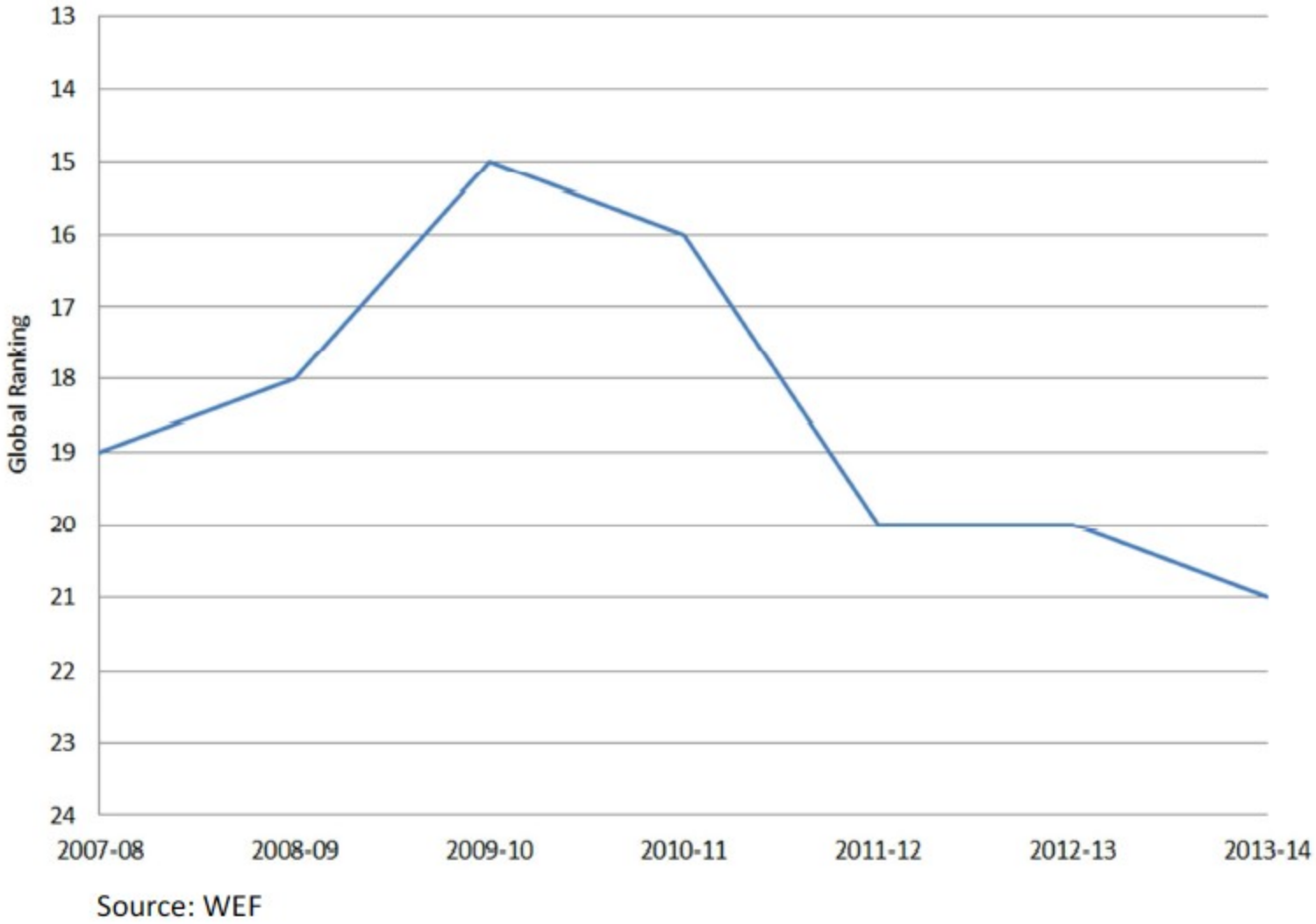
Australia's Global Competitiveness

Country/Economy	GCI 2013–2014 Rank (out of 148)	GCI 2013–2014 Score (1–7)	Rank among 2012–2013 economies*	GCI 2012–2013
Switzerland	1	5.67	1	1
Singapore	2	5.61	2	2
Finland	3	5.54	3	3
Germany	4	5.51	4	6
United States	5	5.48	5	7
Sweden	6	5.48	6	4
Hong Kong SAR	7	5.47	7	9
Netherlands	8	5.42	8	5
Japan	9	5.40	9	10
United Kingdom	10	5.37	10	8
Norway	11	5.33	11	15
Taiwan, China	12	5.29	12	13
Qatar	13	5.24	13	11
Canada	14	5.20	14	14
Denmark	15	5.18	15	12
Austria	16	5.15	16	16
Belgium	17	5.13	17	17
New Zealand	18	5.11	18	23
United Arab Emirates	19	5.11	19	24
Saudi Arabia	20	5.10	20	18
Australia	21	5.09	21	20
Luxembourg	22	5.09	22	22
France	23	5.05	23	21

WORLD ECONOMIC FORUM

NEW ZEALAND ALL BLACKS

Chart 1. Australia's Global Competitiveness Ranking

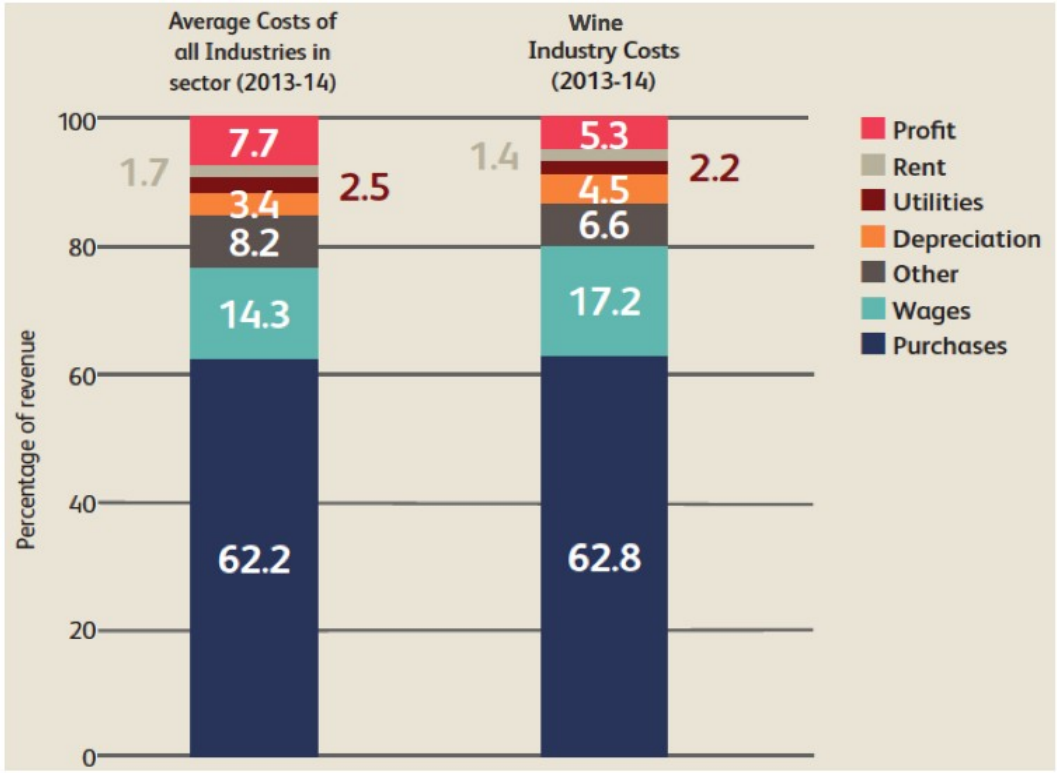


Source: World Economic Forum

What’s making us less competitive?

Increasing cost of doing business

- Labour
- Materials
- Energy
- Water
- Waste
- Regulations



(Source: www.ibisworld.com.au)

The Aussie Dollar

- Slowing exports
- Increasing competition from lower-cost imports
- Affecting key customers and end-markets

Wine glut

- Structural oversupply of wine in Australia
- Australian wine industry currently producing 20-40 million cases a year more than it is selling

These pressures aren't going away….

Option 1

Option 2

What does ‘productivity’ mean?

Improving **business performance** through a continuous process of increasing the ratio of **outputs** to **inputs** in production.

business performance:

- Profitability
- Market position
- Flexibility
- Certainty
- Risk profile
- Safety
- Brand

outputs:

- Wine volumes
- Wine quality
- Revenue

inputs:

- Grapes
- Materials/additions
- Labour
- Energy
- Water
- Waste costs
- Regulatory costs

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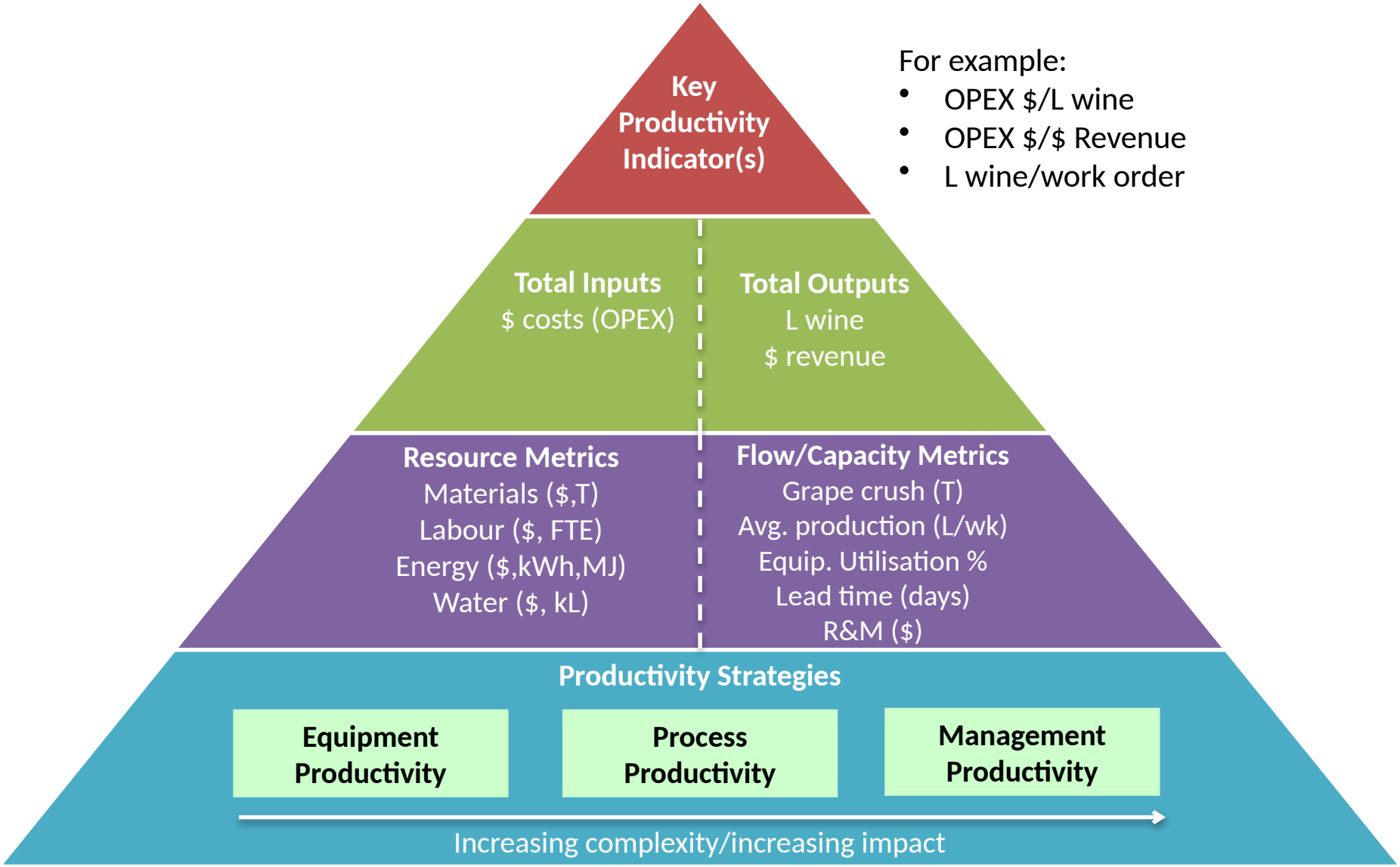
What does ‘productivity’ mean?

A productive solution makes the wine-making process better through improving:

- Materials efficiency
- Water & energy efficiency
- Quality control
- Production speed
- Flexibility
- Safety
- Preventative maintenance

Is there a silver-bullet solution to improving productivity?

Productivity Framework



For example:

- OPEX $/L wine
- OPEX $/$ Revenue
- L wine/work order

Example 1: Continuous pressing systems (equipment-level)

- Many wineries use membrane press filters which are a batch system - creates process flow issues reducing production speed
- An alternative is a continuous pressing method such as screw presses which
  - Smoothens production flow by matching the higher production speeds of destemmers and crushers
  - Are energy-efficient
  - Use less labour per tonne grape crush
  - Requires less R&M costs.

Example 2: Cross-flow filtration (equipment-level)

- Cross flow filtration is an energy efficient form of filtration compared with other wine filtration methods such as earth, pad and membrane filtration
- Cross-flow filtration allows the filtrate to move in parallel to the membrane essentially preventing filtered particles from settling on the membrane reducing fouling.

Example 3: Fermentation efficiency (process-level)

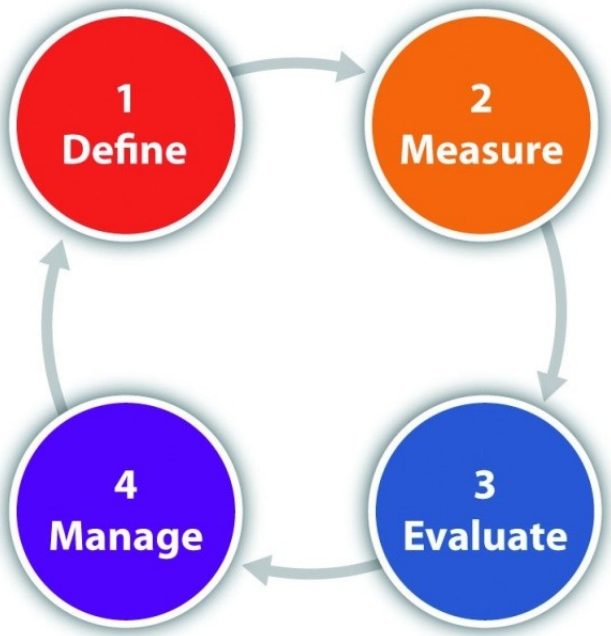
- Efficient fermentation is the end result of quality pressing, wild microbiological control, current microbiological conditions (nutrient levels) & introduced microbiological strains
- Introduce monitoring & standardisation of fermentation conditions increases production speed, reduces energy use, improves turnaround times to free-up fermentation tanks.

Example 4: Automation (process-level)

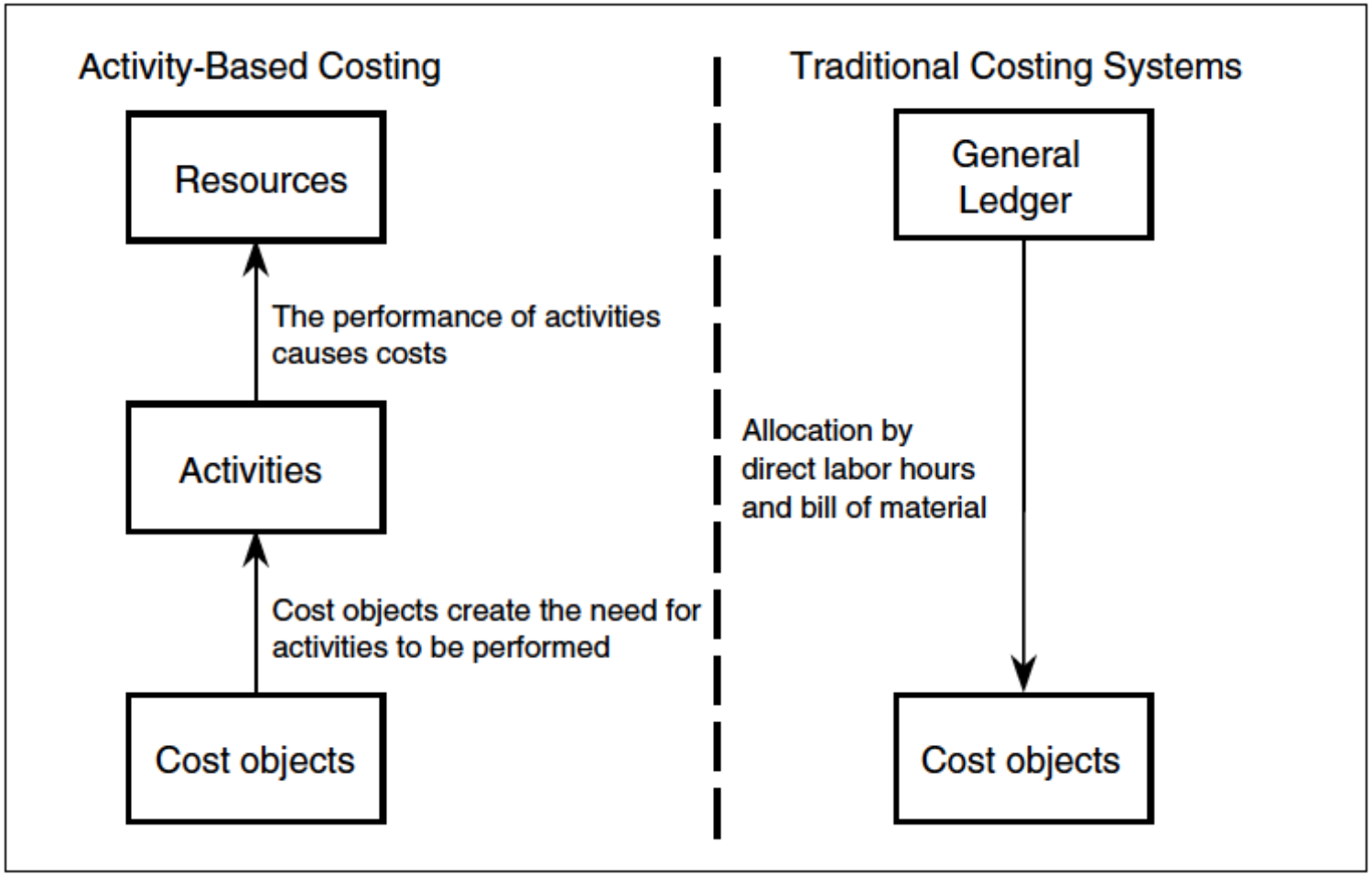
- Good automation and production control can maximise efficiencies on both labour, materials/resource efficiency and production speed
- Automation and production control allows 24 hour control, whether it is refrigeration control or quality systems, and reduces variability between processing batches.

Example 5: Process efficiency metrics (management-level)

- Most high-performing FMCG businesses consistently display a formalised approach to the montioring, benchmarking and management of production performance
- Helps to identify and track opportunities to improve process efficiency and manage product quality.



Example 6: Activity-based costing (management-level)



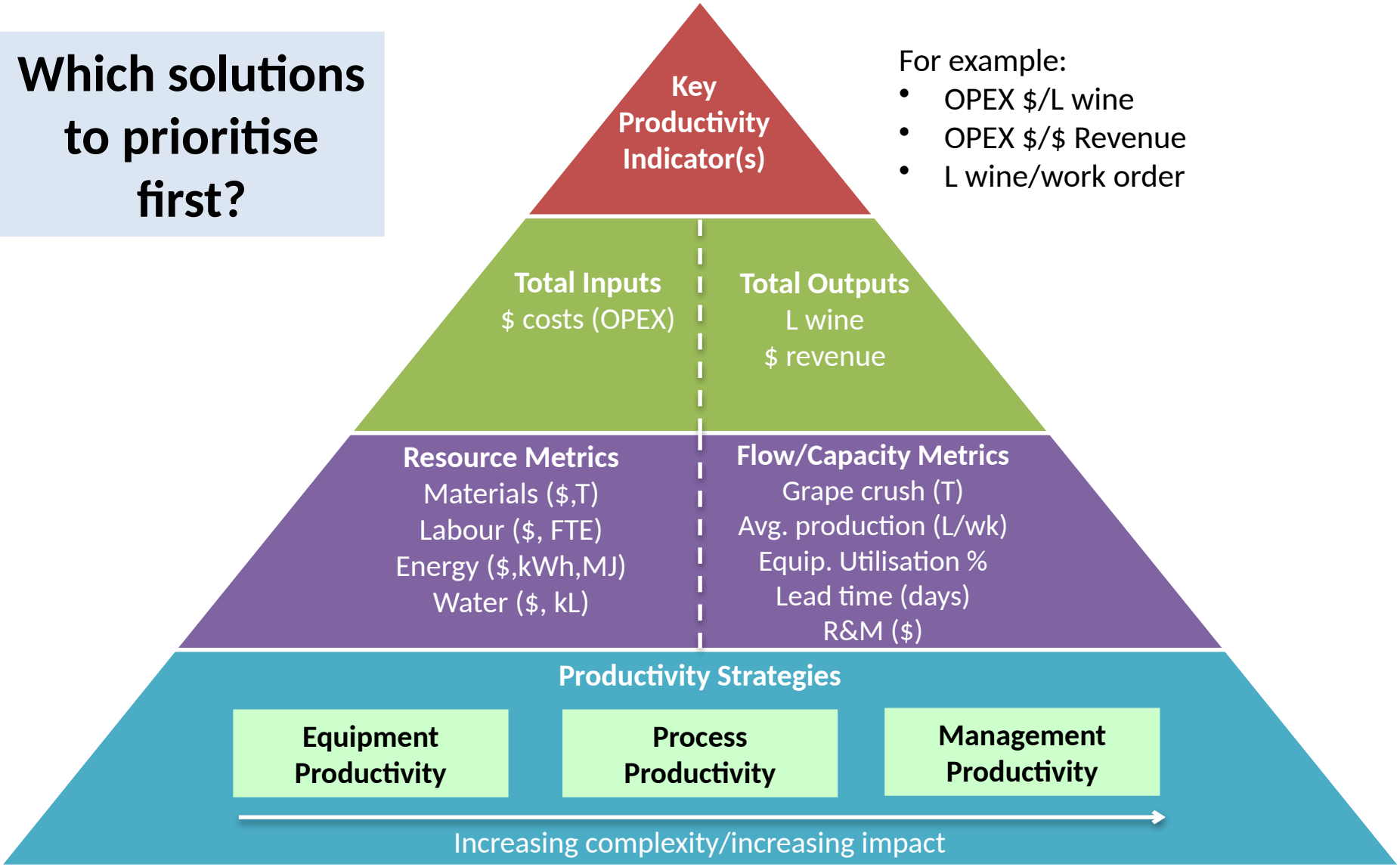
Example 7: Lean production (process-management-level)

Lean Production: a system of tools and practices for improving production operations, suppliers, and customer relations such that the business requires:

- less human effort
- less space
- less capital
- less material, and
- less time to make products with fewer defects to precise customer desires.

Productivity Framework

Which solutions to prioritise first?



For example:

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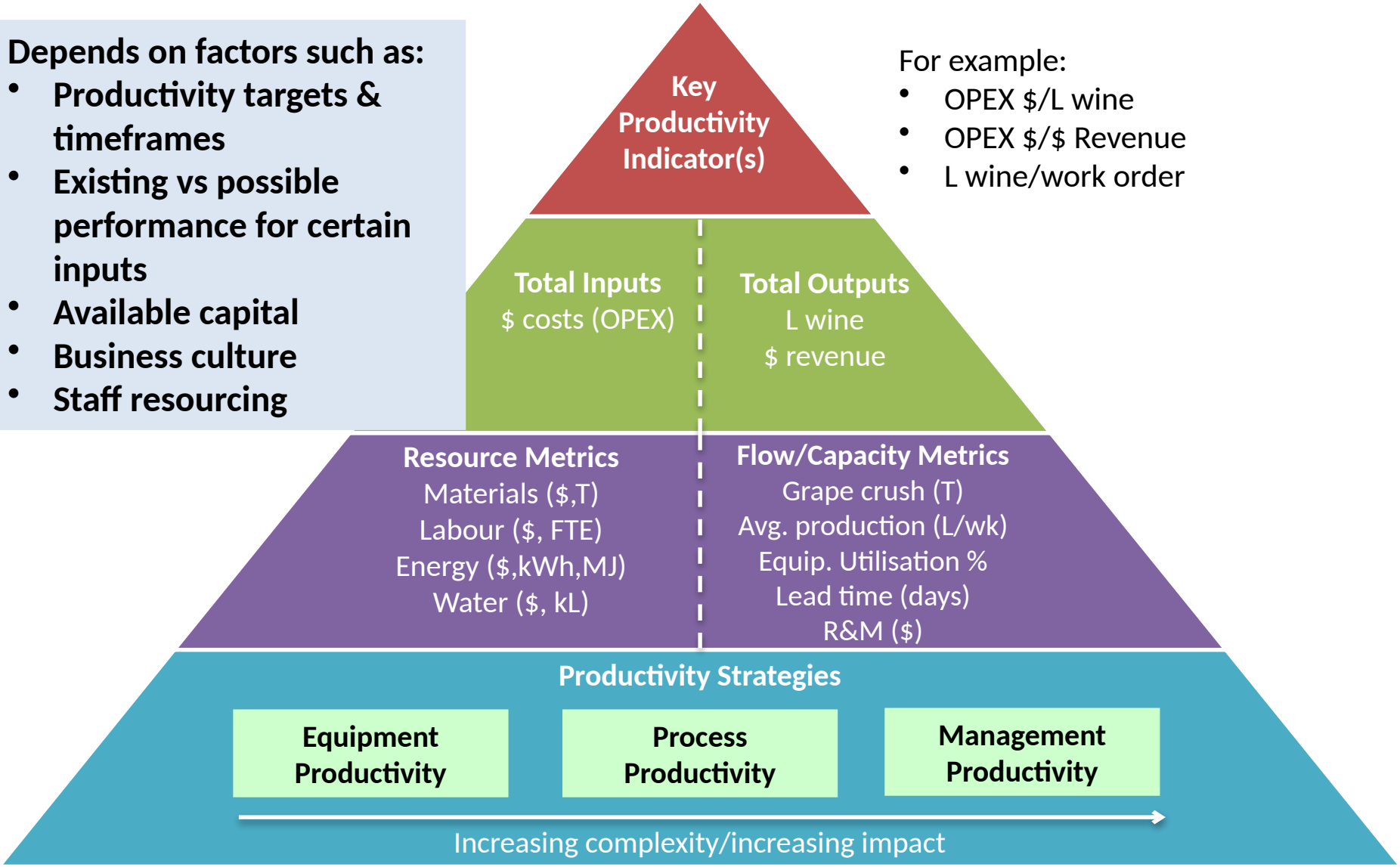
Productivity Framework

Depends on factors such as:

- **Productivity targets & timeframes**
- **Existing vs possible performance for certain inputs**
- **Available capital**
- **Business culture**
- **Staff resourcing**



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Tip 1: Spend the time upfront to define the problem

Determine if the business has:

1. A cost-control problem → **Start with the key cost pools of the business**

OR

2. A growth-control problem → **Start with the capacity-constrained parts of the business**

Tip 2: Consider each resource input as part of the bigger productivity picture

- Efficiency for ‘efficiency’s sake’ can only take you so far
- Resource consumption provides an indicator of how efficient (or inefficient) the business is operating
- The best resource efficiency improvements are the ones that improve the overall productivity of the business
- Helps to challenge assumptions about what’s possible in the business

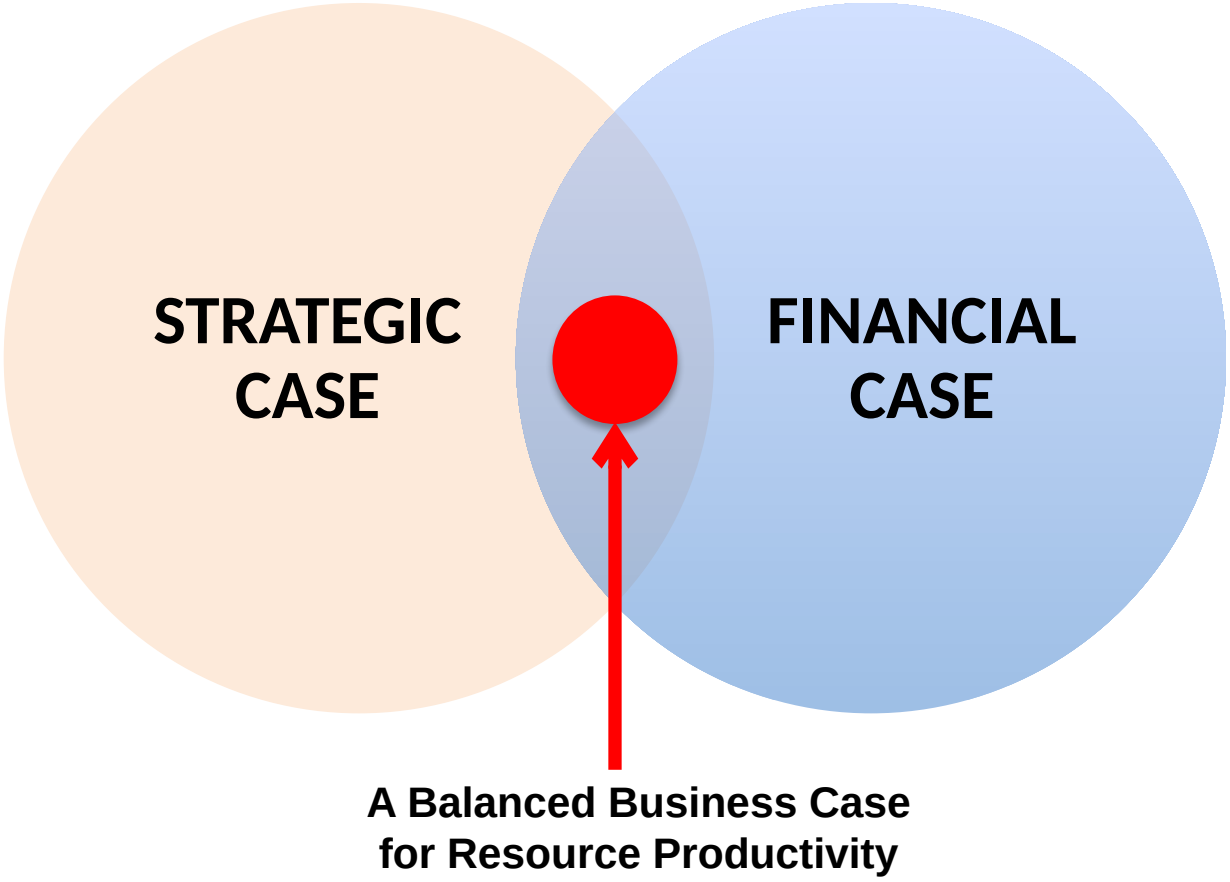
Consider energy together with all physical inputs and outputs (materials, labour, water, waste) to identify productivity ‘sweet spots’

Tip 3. Find solutions that deliver multiple benefits

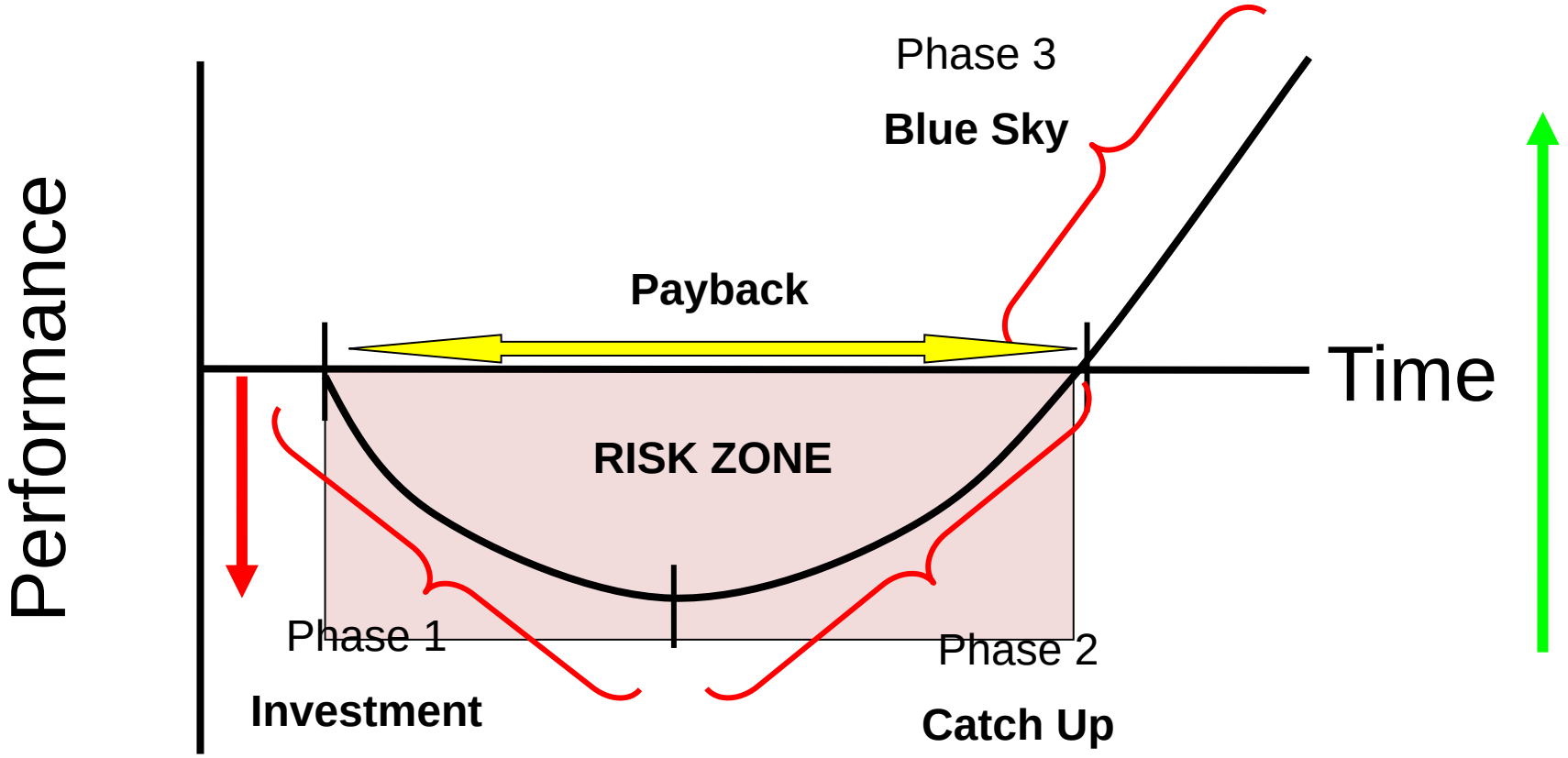
- Cost savings associated with energy consumption
- Reducing maintenance costs and downtime
- Reduced costs associated with water, materials and waste consumption
- Improved process flow
- Improved quality control
- Delayed need for capital expenditure

These additional benefits are often much bigger than the $$ saved in energy…. (high energy consumption can be considered a symptom of a system not working properly!)

Tip 4. Resource productivity should start with the business case, not end with it

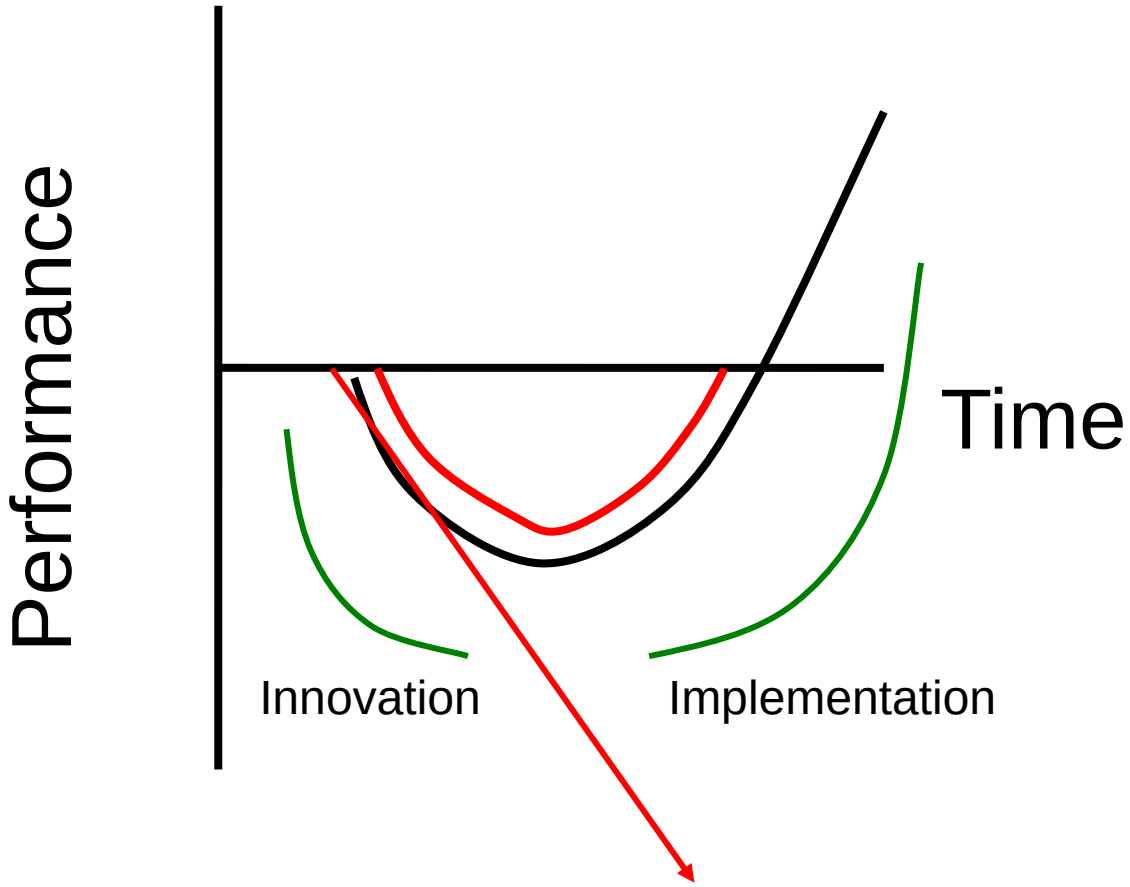


Tip 5. Make sure you have the capability (and stomach) to follow-through

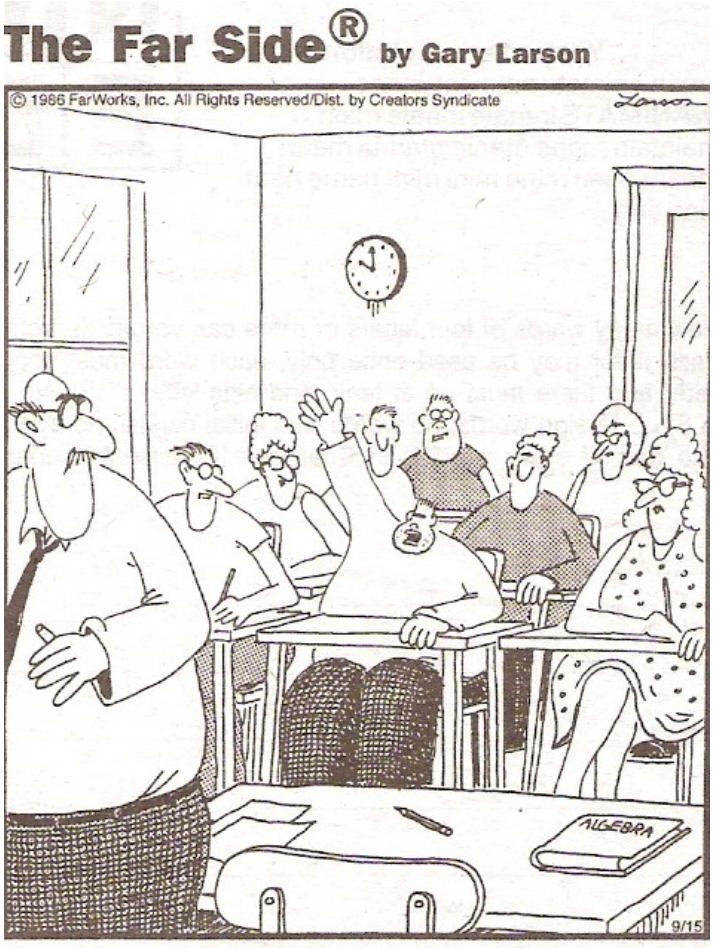


J-Curve model courtesy of RealTimeCEO (www.realtimeCEO.com)

Rules for managing J-Curves



J-Curve model courtesy of RealTimeCEO (www.realtimeCEO.com)

1. Measure and manage depth and breadth of the valley
2. Do NOT become emotionally connected to the J curve
3. Do NOT take on too many macro J curves at once
4. Have and manage a plan to move from phase 1 to phase 3 as quickly as possible
5. Establish a J Curve Register.

THANK YOU -- ANY QUESTIONS?