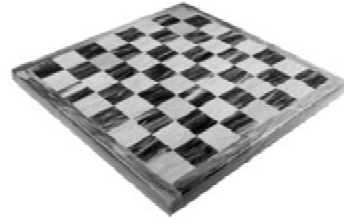


LEANCOACHING

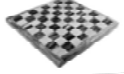


Kunden - Logo

Policy Deployment: “Hoshin Kanri” process

Gert Haar-Jorgensen

13 April 2012



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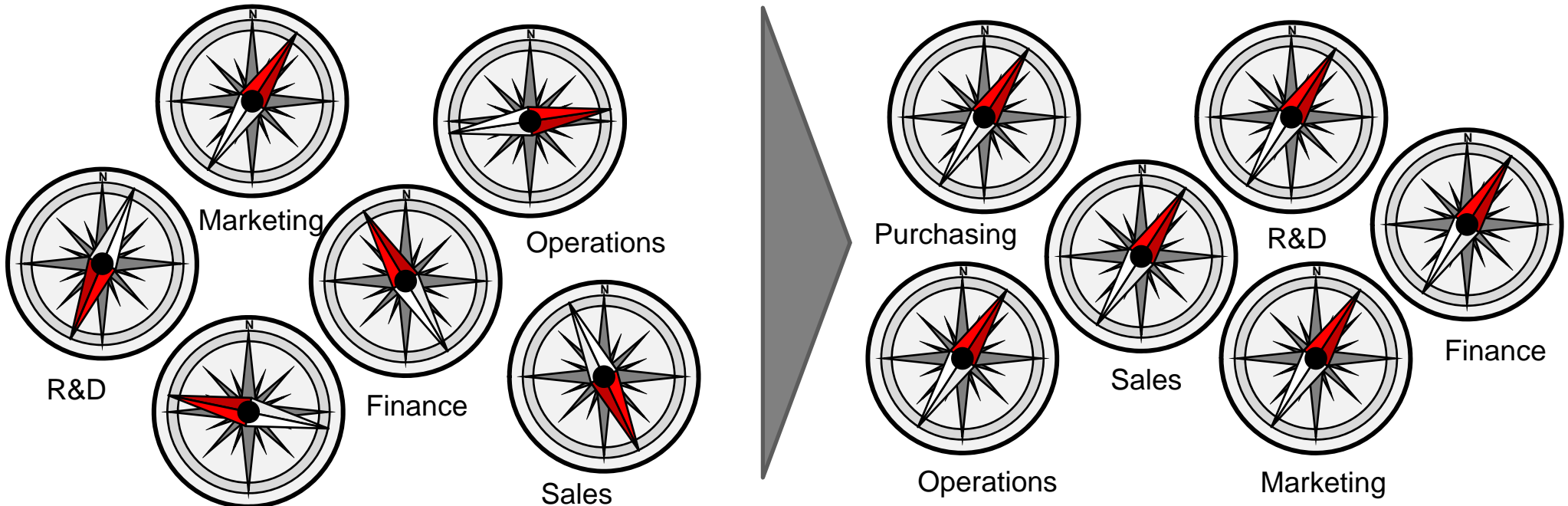


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Hoshin Kanri literally means “managing the direction” (of the company)...



方針 管理

Hoshin Kanri

Hoshin = Compass Needle

Kanri = Management

Ho = Direction

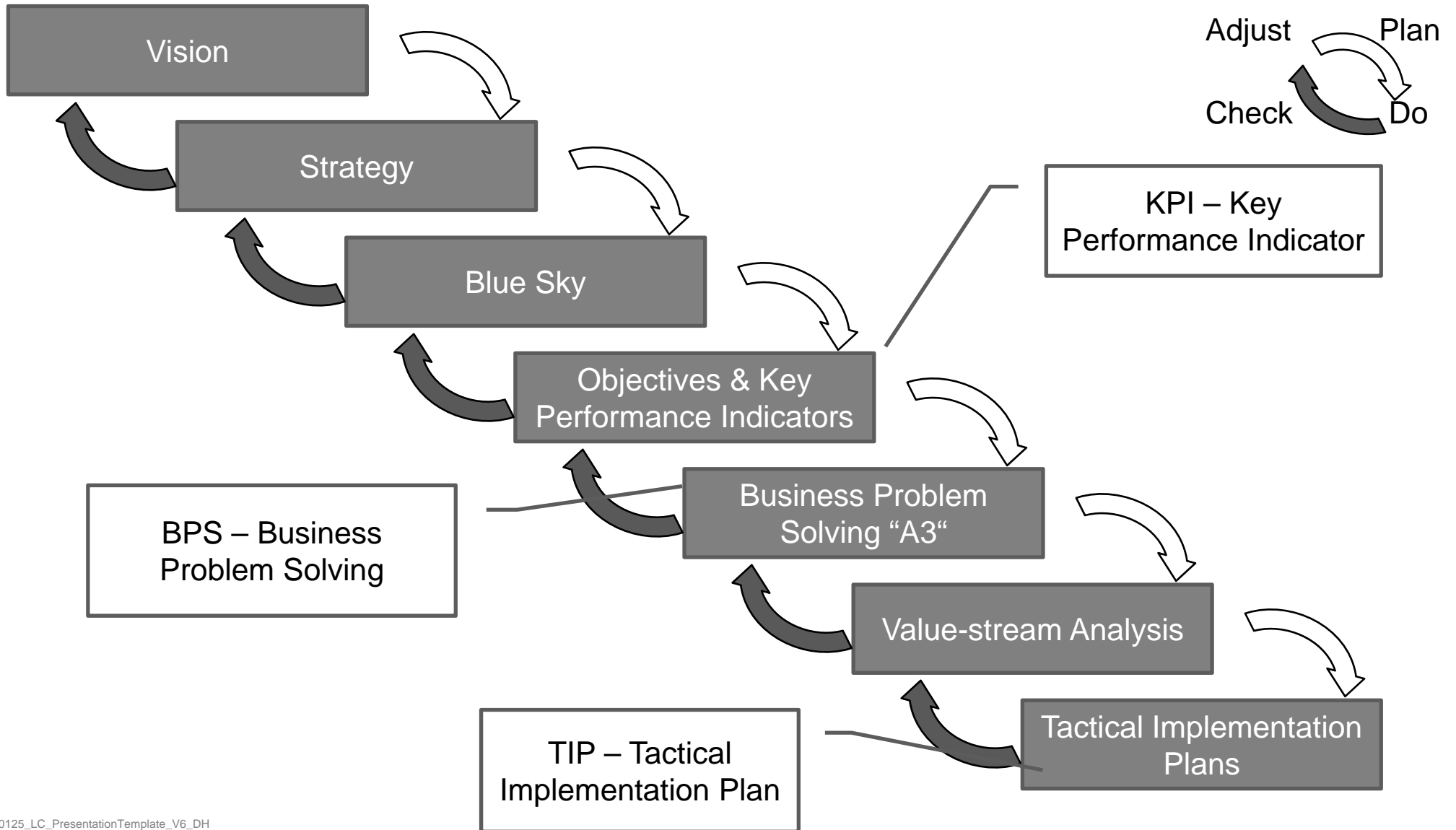
Shin = Needle

Kan = Control

ri = Logic

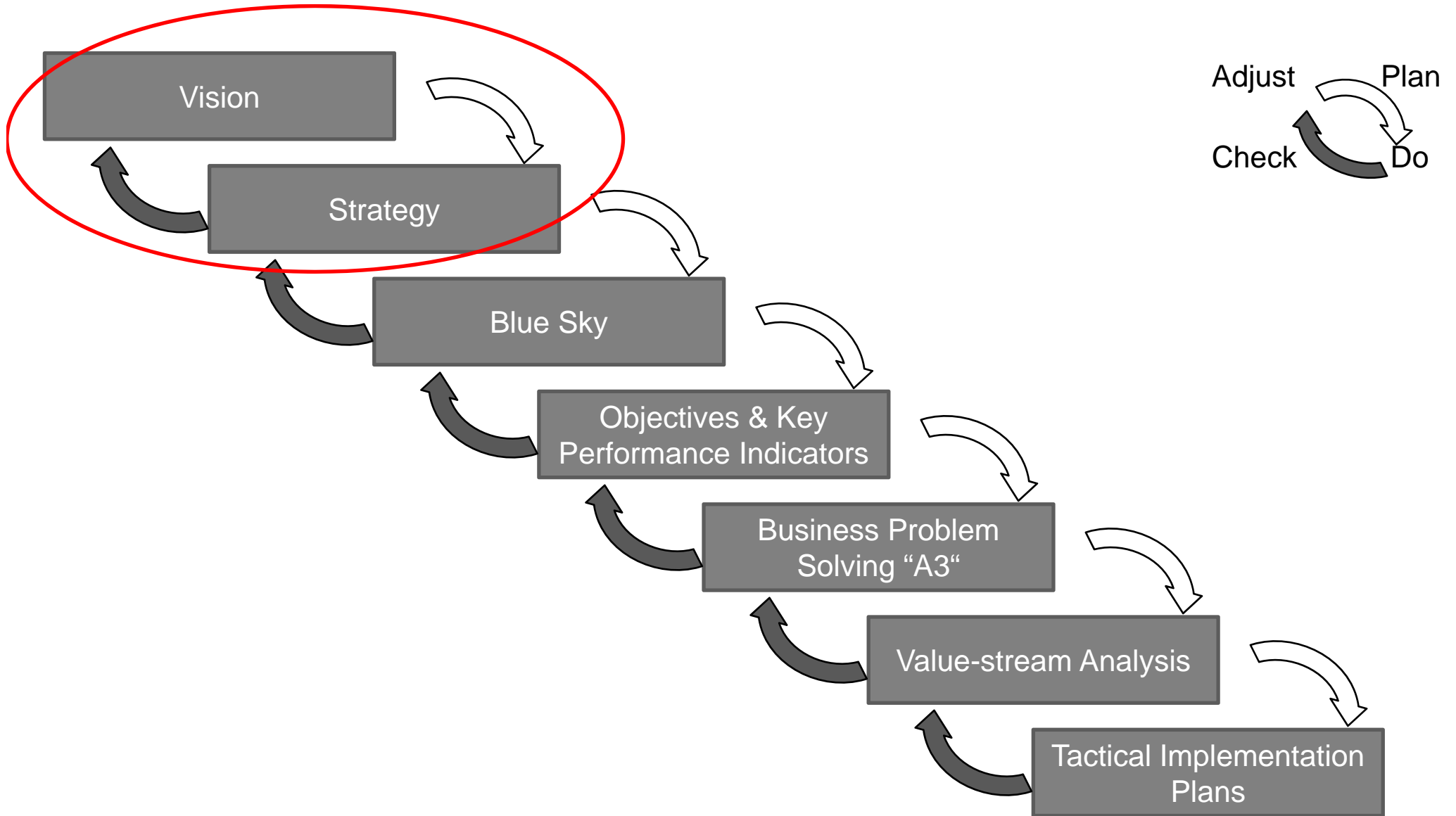


Hoshin Kanri's core process cascades vision to KPIs and then actions using rigorous PDCA feedback cycles





Hoshin Kanri's core process cascades vision to KPIs and then actions using rigorous PDCA feedback cycles





Toyota Motor Manufacturing North America Mission¹

- 1. As an American company, contribute to the economic growth of the **community** and the United States.*
- 2. As an independent company, **contribute** to the **stability** and **well-being** of team members.*
- 3. As a Toyota group company, contribute to the **overall growth** of **Toyota** by adding value to our customers.*

¹ The Toyota Way, by Jeffery K. Liker, page 80.

Process: Blue Sky Workshop

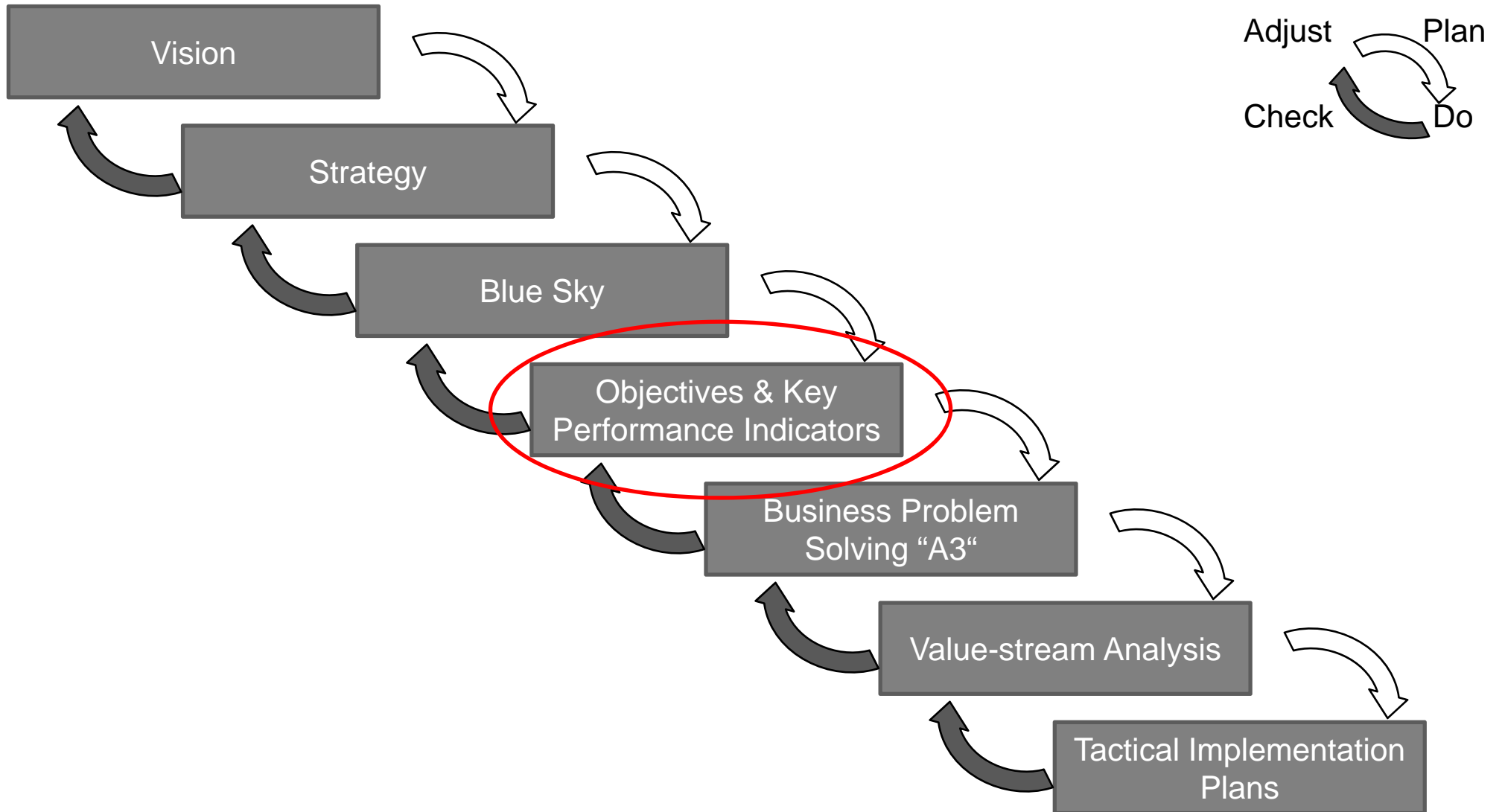


Result: Blue Sky

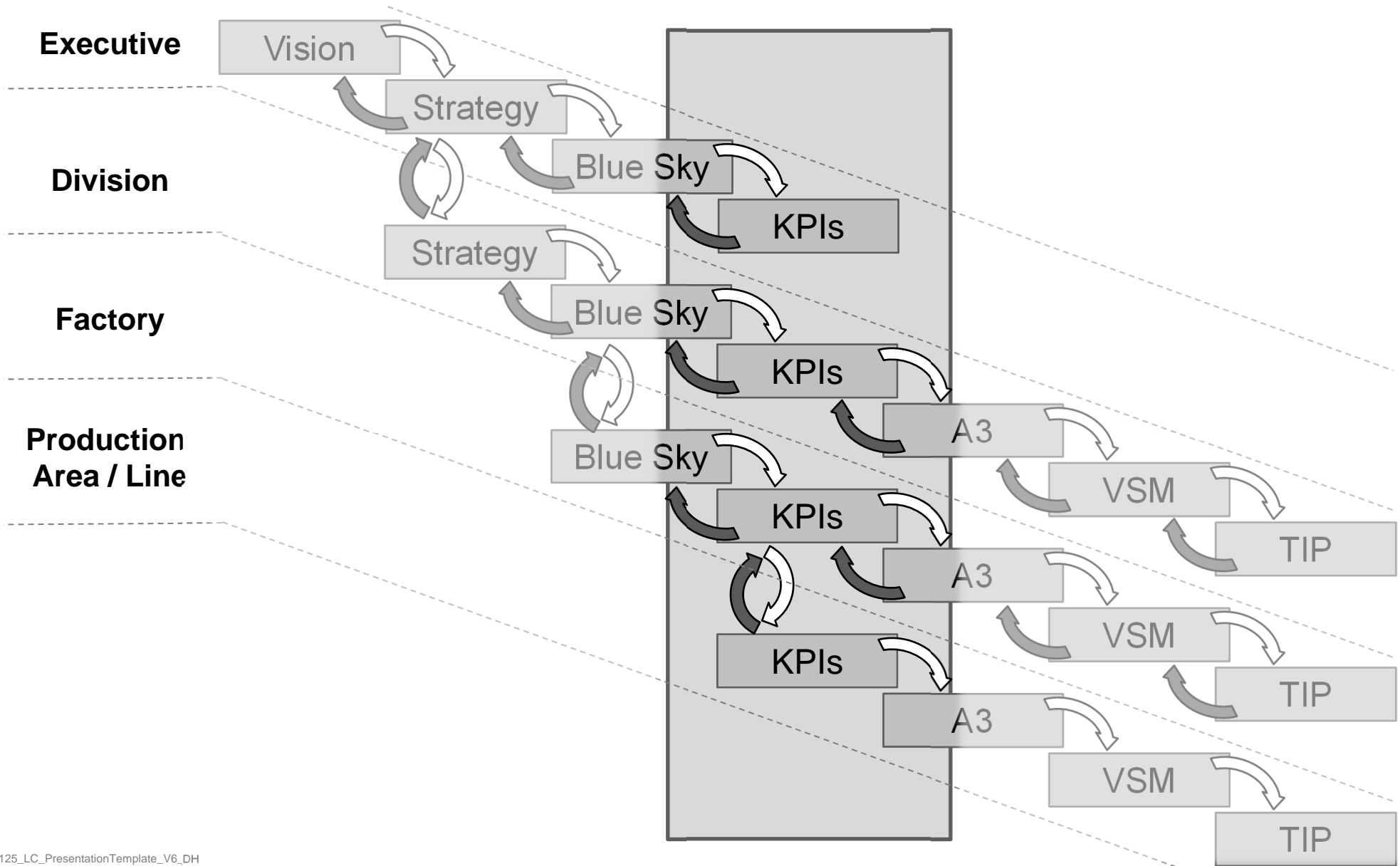
MORALE	DELIVERY	COST	SAFETY	QUALITY	ENVIRONMENTAL
<p>Empower employees through a creation of team environment</p> <ul style="list-style-type: none"> Team concept Create member development concept and plan Review shop instructions Effective communication Team discussion improvement Standard Stress Code <p>Create an environment where employees want to come to work</p> <ul style="list-style-type: none"> Celebrate success Create team and team Member recognition Set the process to improve Team member surveys Management presence on the shop floor as an escape Member awards recognition <p>Create ownership at all levels</p> <ul style="list-style-type: none"> Plan mission Own sharing Clear roles and responsibility OT-Care/Attendance <p>Create an environment of mutual trust and respect</p> <ul style="list-style-type: none"> Accountability Who are all team members Listen and take action Team members are all Lunch-box meetings Personal touch events <p>Become a good corporate citizen</p> <ul style="list-style-type: none"> Community involvement Communicate with the community Educate the community on what we do and who we are Planning to give back to the community Community open house 	<p>Meet customer (external & internal) delivery requirements</p> <ul style="list-style-type: none"> Reduce downtime FIFO Build to plan Establish out-look agreements Antion system <p>Reduce leadtime</p> <ul style="list-style-type: none"> Trigger system Reduce in process inventory Reduce over line inventory Standardize who <p>Implement and operate as a pull system</p> <ul style="list-style-type: none"> Willing Trigger system Small lot containers Reusable packaging Trigger delivery Cling of parts <p>Create a visual factory</p> <ul style="list-style-type: none"> Harmon For its presentation 5S Management Pro center Min labor system Clamp Flow by flow 	<p>Lowest cost Class 8 Truck Manufacturing Plant</p> <ul style="list-style-type: none"> Inventory reduction Improve direct and indirect labor productivity Vendor recovery Improve variable and fixed cost <p>Cost reduction through CI</p> <ul style="list-style-type: none"> Yamazaki - waste reduction Complexity management Circle talk line Establish standard work VAVE value added value engineering Educate and empower employees 	<p>Become a benchmark 5S facility</p> <ul style="list-style-type: none"> Establish expectations Lead in failures Risks and responsibility Budget accordingly <p>Establish ergonomically friendly processes</p> <ul style="list-style-type: none"> Ergonomic education for all members and corporation Job hazard Analysis Working system process ratings Proper budgeting Job rotation <p>Zero accidents through proactive safety awareness</p> <ul style="list-style-type: none"> Identifying excellence to job by items Clear miss training and tracking Establish safety awareness program Accountability Communication Accident cross check to QW Problem solving Reduce vehicle traffic Plant safety slogan AMP member recovery program Lead DTNA in health and wellness Anti smoking program Improve dietary choices for members Plant physical fitness center Medical screenings 	<p>Zero defects</p> <ul style="list-style-type: none"> Quality feedback loops Quality meetings Problem Solving <p>Create an environment where standard work is the foundation of our TOS</p> <ul style="list-style-type: none"> Quality assurance standards Standards work for 0 hrs and after days Production procedure Poke-yoke Changeover Be viewed as the highest quality Class 8 Truck Manufacturer 10 Power and Chgo awards <p>Achieve PPM</p> <ul style="list-style-type: none"> Daystar quality management system 	<p>Zero environmental footprint</p> <ul style="list-style-type: none"> Hazardous waste reduction Reduce emissions 100% recycling Zero land fill <p>Become a world class environmental facility</p> <ul style="list-style-type: none"> Waste reduction Educate team members on Environmental impact Improve energy efficiency



Hoshin Kanri's core process cascades vision to KPIs and then actions using rigorous PDCA feedback cycles

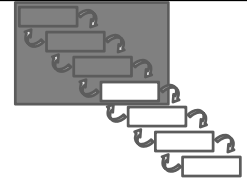


A common problem is translating the financial metrics of the ROCE tree into Process KPIs





From each “Blue Sky”, KPIs define what needs to be measured, and specific targets can be cascaded to all levels



Business Objectives
Human Development
Quality Improvement
Lead Time Reduction
Cost Reduction

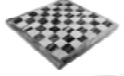
Factory Targets		
Production Costs	Product A	-10%
	Product B	-14%
	Product C	-15%
Material Costs	Product A	- 8%
	Product B	-11%
	Product C	-12%

Department* Targets		
Product A	Std. Time Product A	-8%
	Downtime	-25%
	Overhead Costs	-12%
Product B	Std. Time Product B	-10%
	Downtime	-15%
	Overhead Costs	-12%
Product C	Std. Time Product C	-9%
	Downtime	-17%
	Overhead Costs	-11%

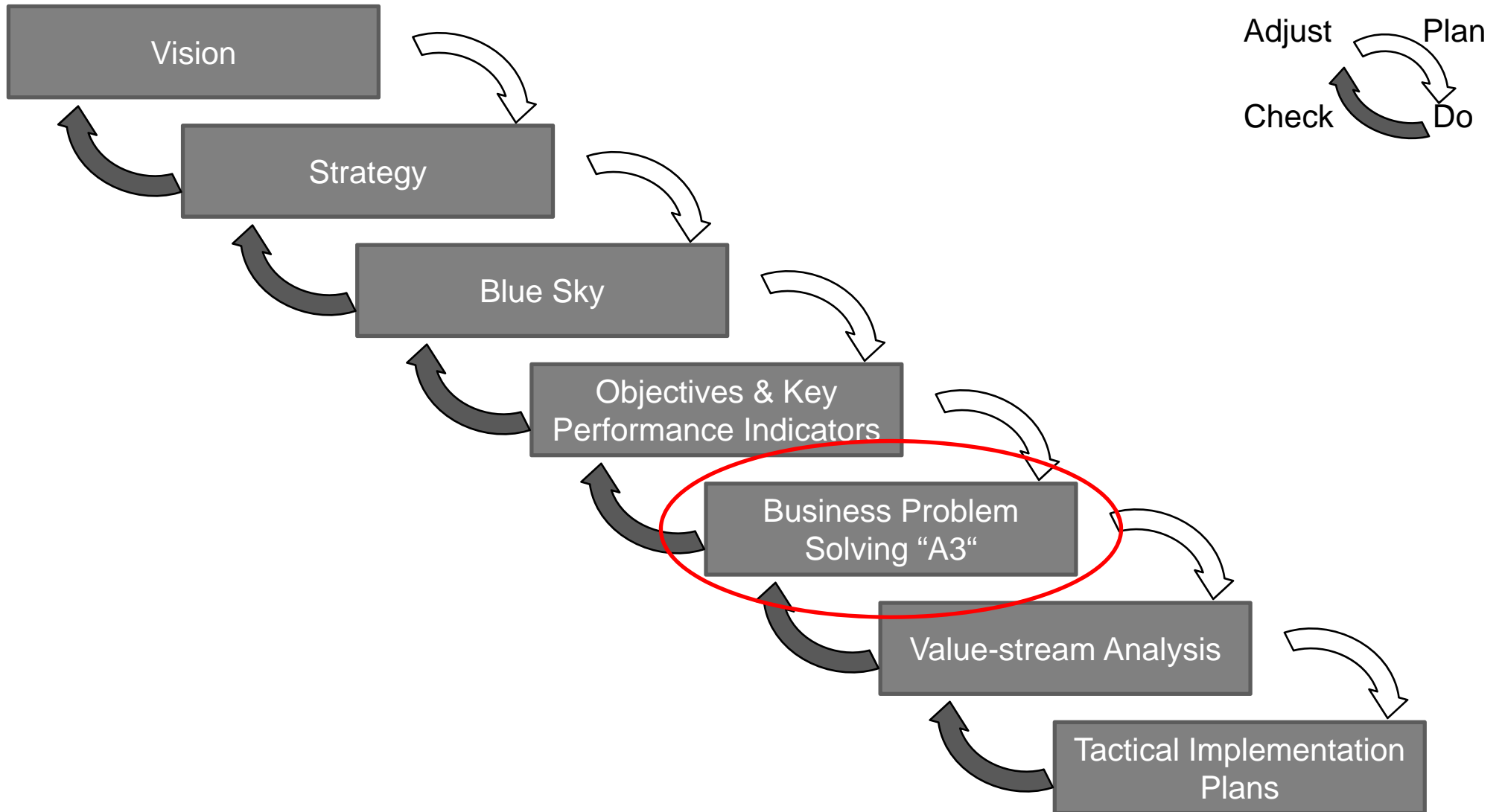
Area/Line Targets		
Machining	Std. Time Part A14	-7%
	Std. Time Part A16	-9%
	Line Availability	+25%
	Energy Costs	-14%
Sub Assembly	Std. Time Product X	-7%
	Std. Time Product Y	-14%
	OEE Assembly Eqpt	-15%
	Transport Costs	-14%
Final Assembly	Std. Assembly Time	-18%
	Line Availability	+14%
	Labor Costs	-12%

* Organised by Value stream



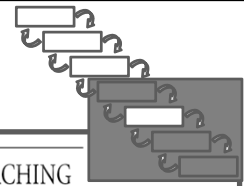


Hoshin Kanri's core process cascades vision to KPIs and then actions using rigorous PDCA feedback cycles





Business Problem Solving A3's analyse objectives to develop a high level action plan for each unit or area



Final Assembly	Std. Assembly Time	-18%
	Line Availability	+14%
	Labor Costs	-12%

Business Problem Solving A3

Factory	Department	A3 Title	Sheet #	Date	Author	Signatures
1 Imbledon	Assembly	Example	1	28 Oct 2010	John Smith	

Performance, Gaps & Targets

Key metric and current target:
 Dealer quote turnaround within 48 hours
 Should consistently be at 95% or higher

Reason:
 Competitor response: 100% within 48 hours, 95% within 24 hours
 Municipal fleets bids are time critical for dealer to respond to gov't RFP

Business Objectives and Goals

What?	How much and by when?
Dealer Quote turnaround time	Consistent 95% within 48 hours by YE 2010 (this year) Consistent 95% within 24 hours by YE 2011 (next year)

3 Reflection

Past Activities	Results and Lessons Learned
<ul style="list-style-type: none"> Reduced SP21 compatibility discrepancies Short Order Board Surveyed Sterling dealers on time expectations Tried to increase applicability of standard mode 	<ul style="list-style-type: none"> Saw improvement in # quotes requiring research; minimal impact on time Current process creates shortages and errors 90% response; 24 hours turnaround expected by majority of dealers Fewer requests required evaluation time but dealers didn't like limits

4 Analysis & Rationale

Examples of tools used and information displayed here:
 Value Stream Map, Swimlane map
 Graphs (eg from market studies)
 SWOT Analysis
 Rationale:
 (Conclusions – selected countermeasures to pursue; prioritised items for action focus)

5 Action Plan

Theme	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Policy	Clarify delegated authority limits	█											
Policy	Publish decision tree for approved product options												
Metric	Verify current turnaround data accuracy	█											
Process	Identify and address barriers to PreQuote		█										
Process	Complete appropriate segment process maps			█									
Process	Develop capacity plans and resource allocation				█								
Process	Improve ability to quickly detect request for quote					█							
People	Get appropriate resources to work						█						

6 Check

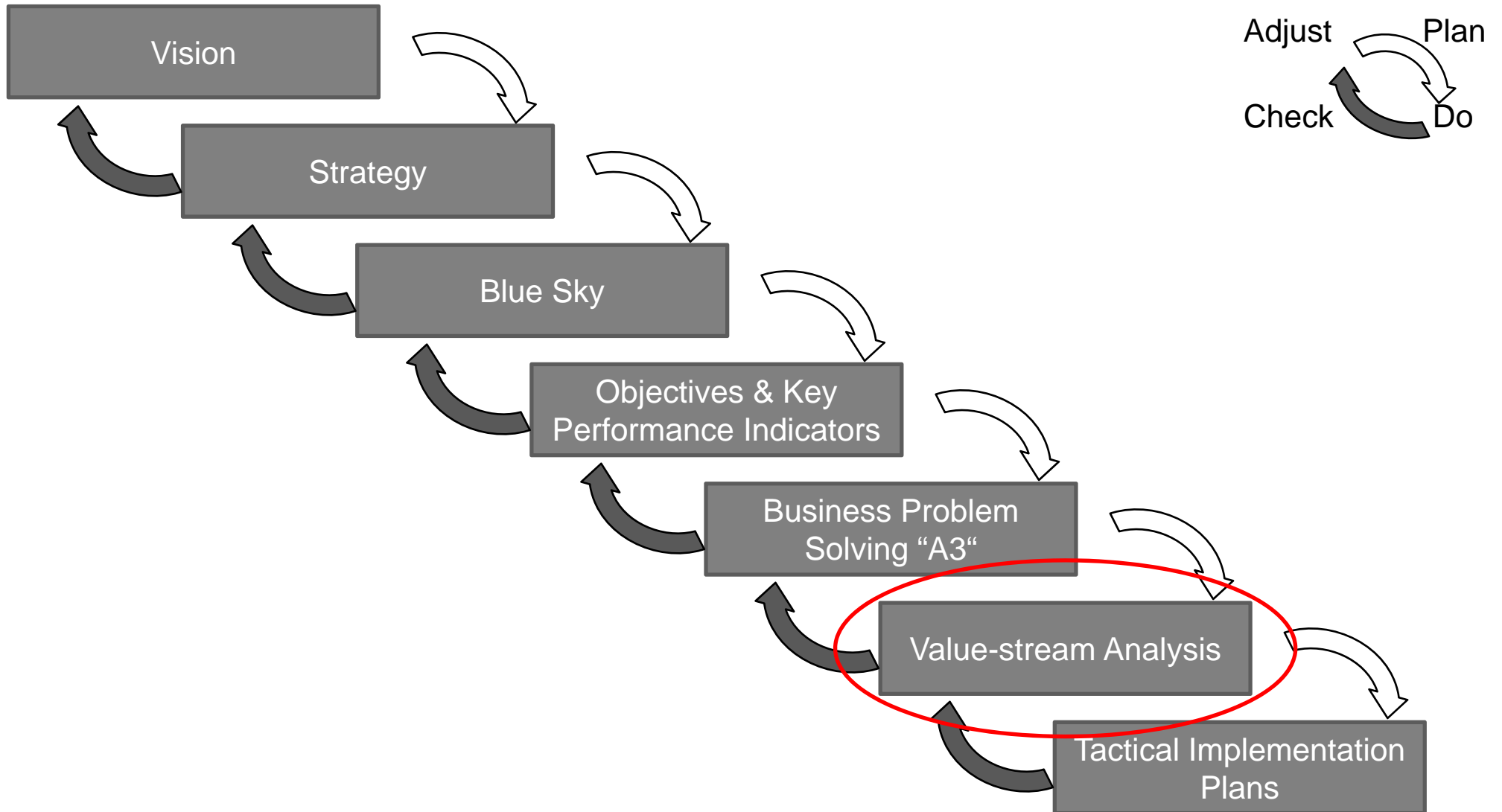
War room visual display of individual TIP plans and progress; key metrics and supporting metrics
 Weekly project reviews and monthly steering committee reviews initiated by Bob
 Include monthly turnaround time in monthly Scorecard reviews
 Bob send Market issues to Jane, Product Issues to Christoph
 Engage in best practice review with Sales and Trucks 2

7 Unresolved Issues

Unclear on who has authority to decide the allowed options
 Resources needed for training teams on TOS tools may not be easy to schedule
 IT solution on synchronization may depend on test systems vs. production systems
 How to identify and resolve contention for critical experts among competing initiatives



Hoshin Kanri's core process cascades vision to KPIs and then actions using rigorous PDCA feedback cycles

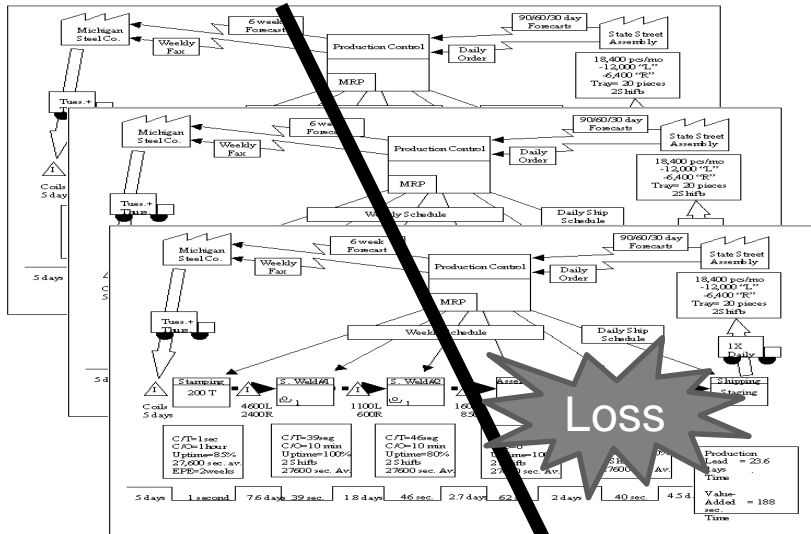




Value Stream Analysis forms the backbone for assessing the process capability and potential

Analyse Current State

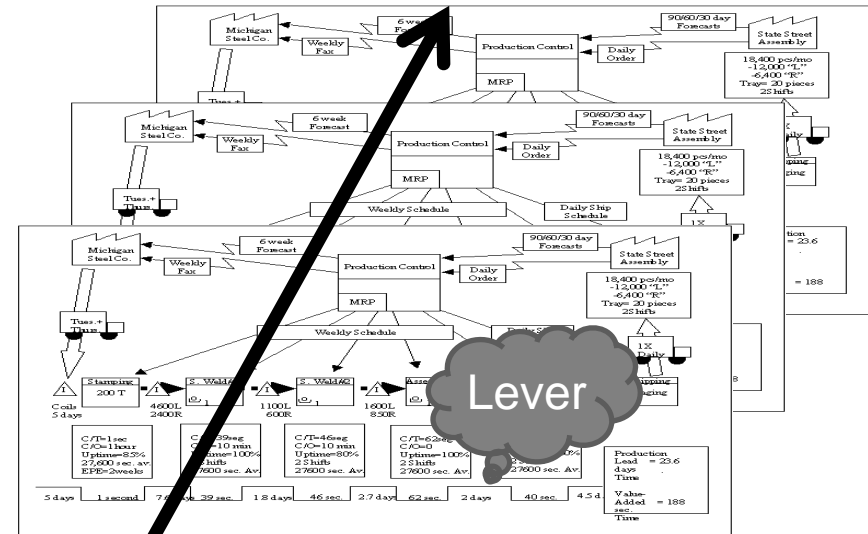
Design Future State



Company

Factory

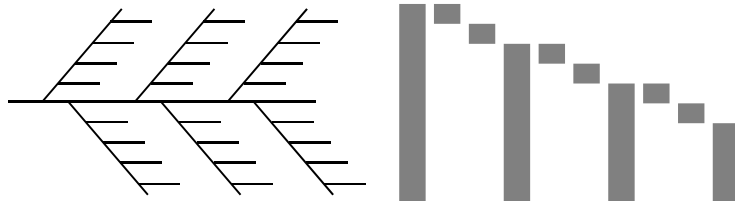
Line / Cell



Identify Process Drivers

Quantify Potential

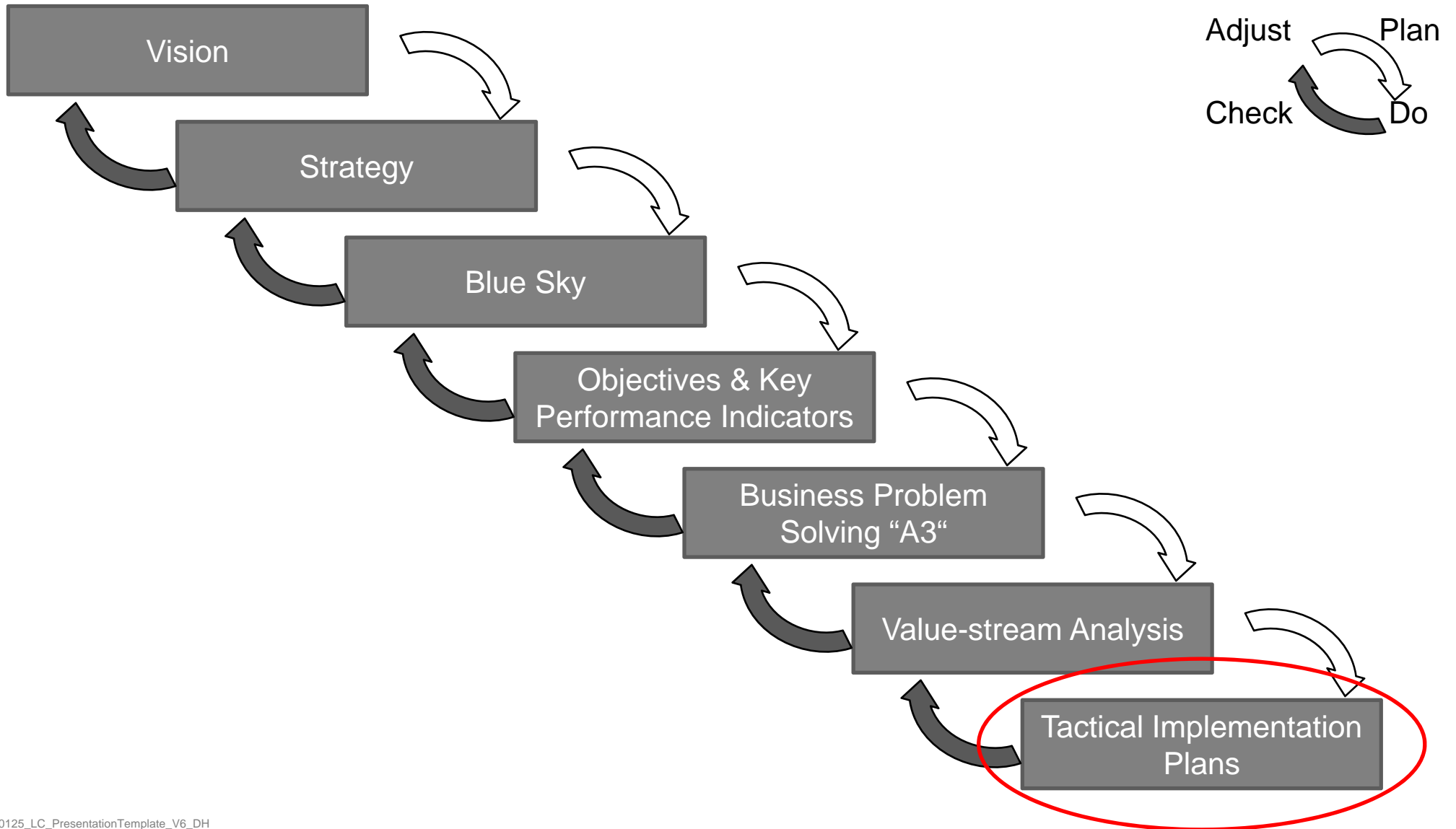
Define Lean Levers



- 5S
- Standard Work
- Line balance
- Pull
- OEE...

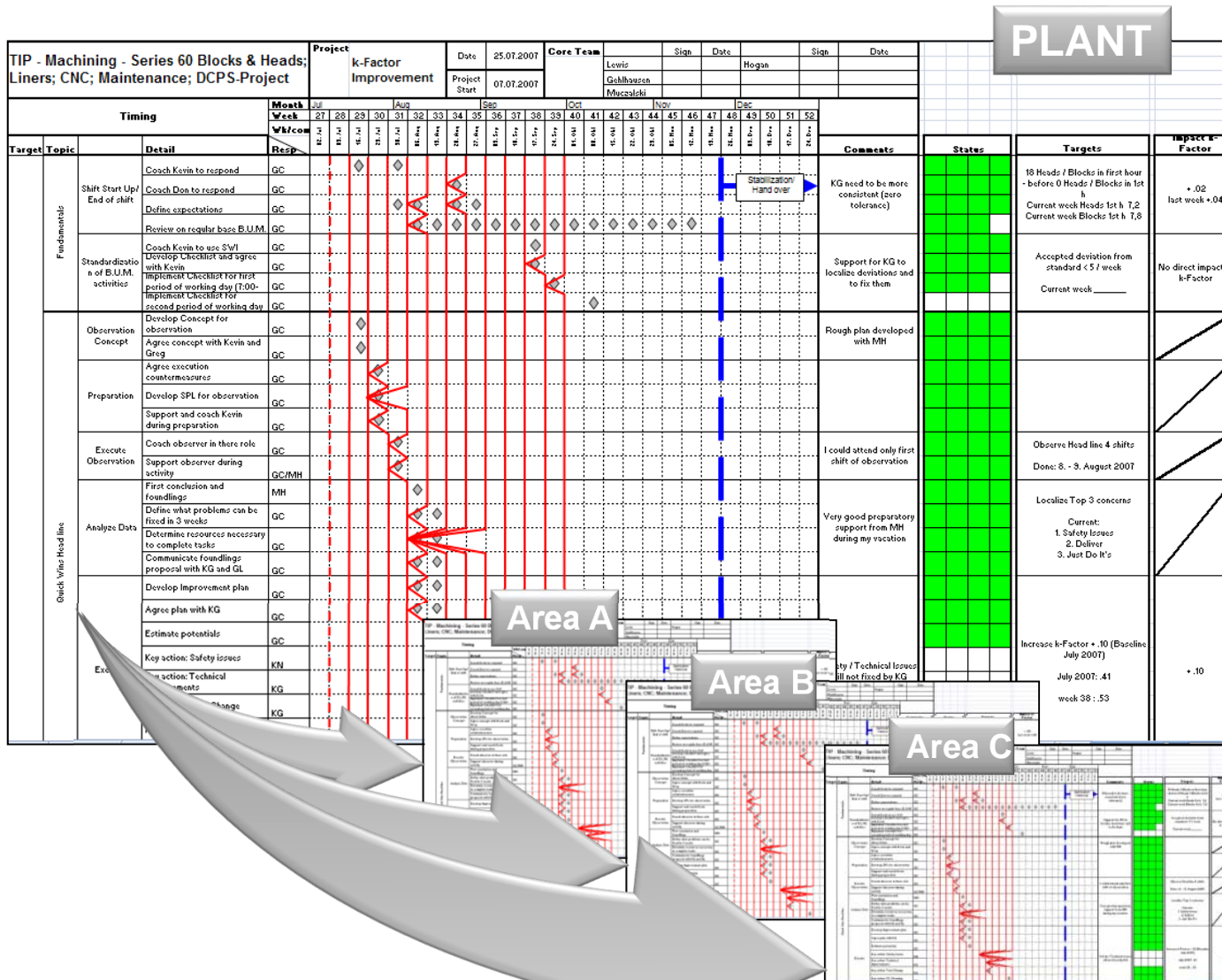


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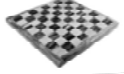
Tactical Implementation Plans (TIP)



Use of TIPs in the project

- High level project TIP created early in project
- High level TIP (Plant) broken down into specific Area TIP's
- Area TIP cascaded to and Supervisor TIP's
- Area TIP's and LPL TIP's displayed in the information centre
- TIPs designed to introduce tools in a structured way after a 'need' has been created

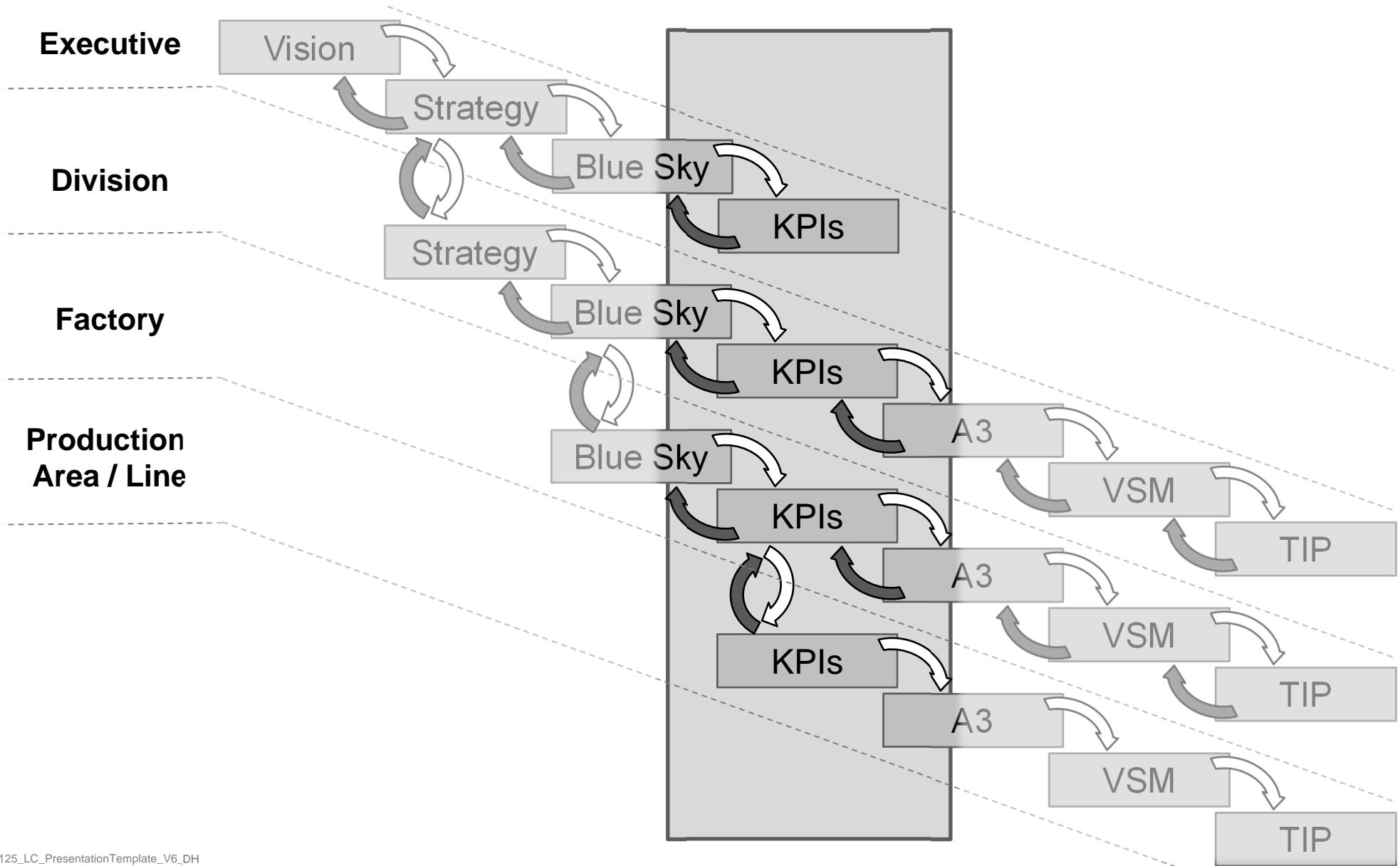
Early development, agreement and signing of TIP crucial to setting clear direction



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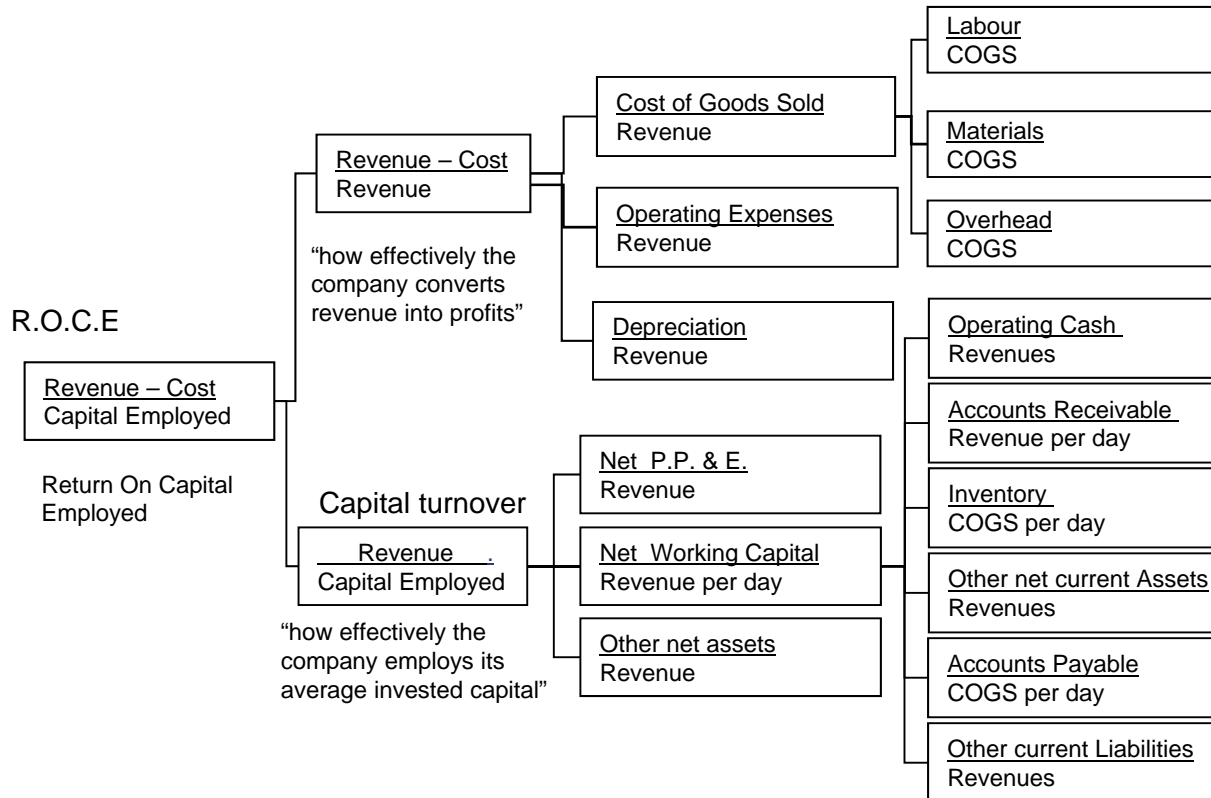


Building a ROCE tree will help develop a full understanding of company financials

ROCE TREES

Example

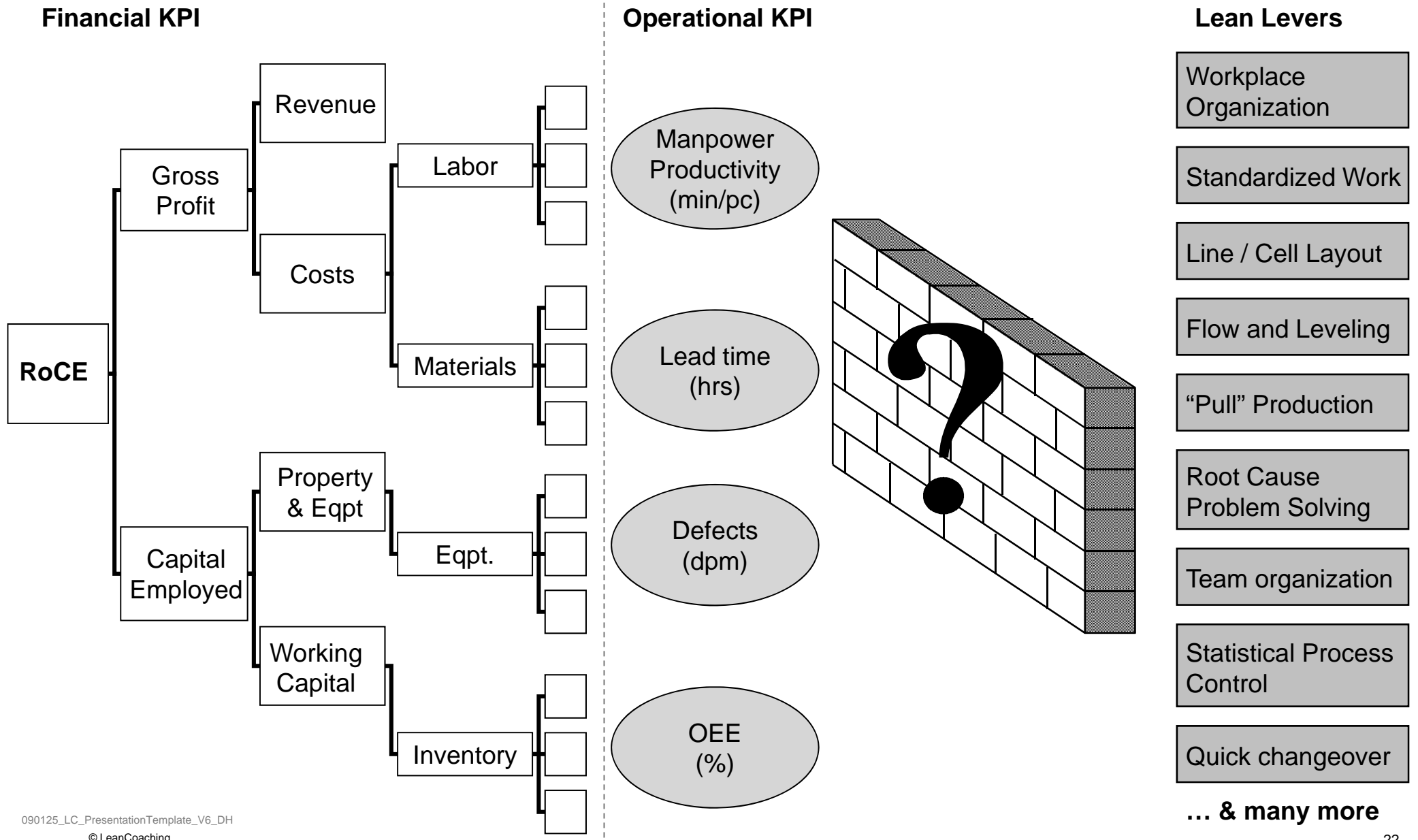
Application



- The tree creates financial linkage for production improvements to performance of the organisation
- It highlights which levers need to be pulled
- It can be used to show a before and after effect.
- It helps to prioritise implementation actions

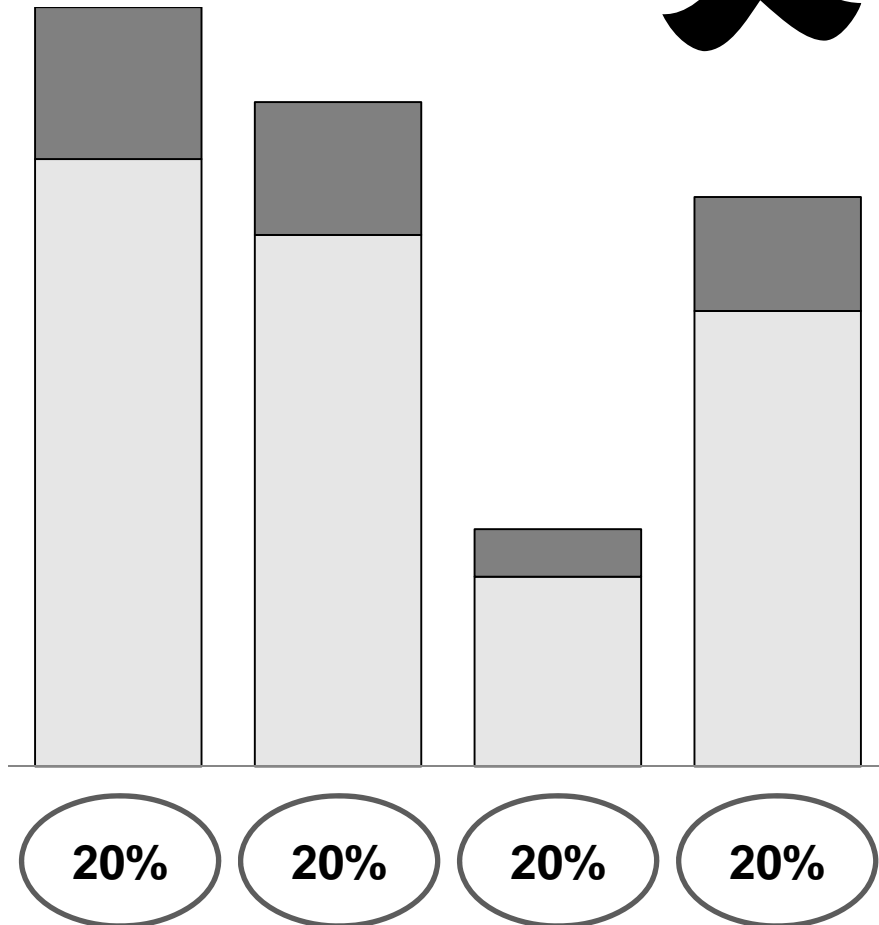
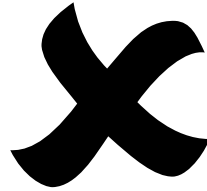
*sometimes called ROIC (Return on Invested Capital), when using a financing approach

Actually, the problem is linking operational KPIs to improvement levers

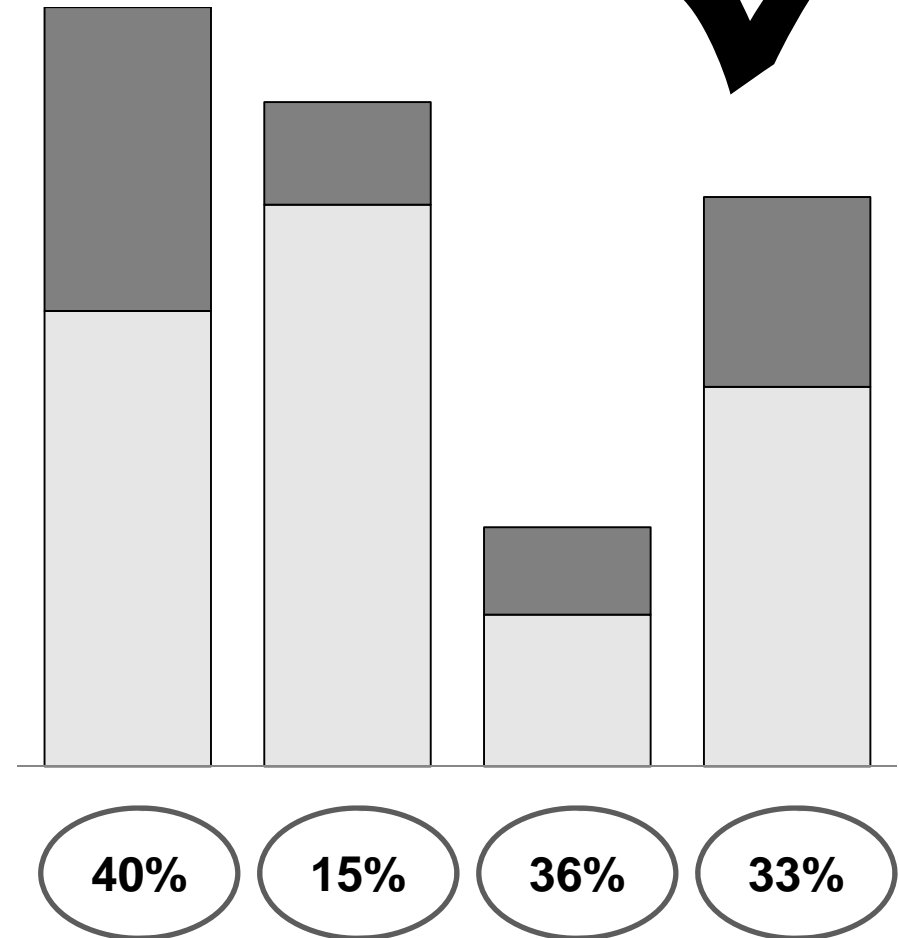


KPI targets will be ineffective unless determined with an understanding of process limits and improvement potential

Arbitrary improvement targets



Specific improvement targets



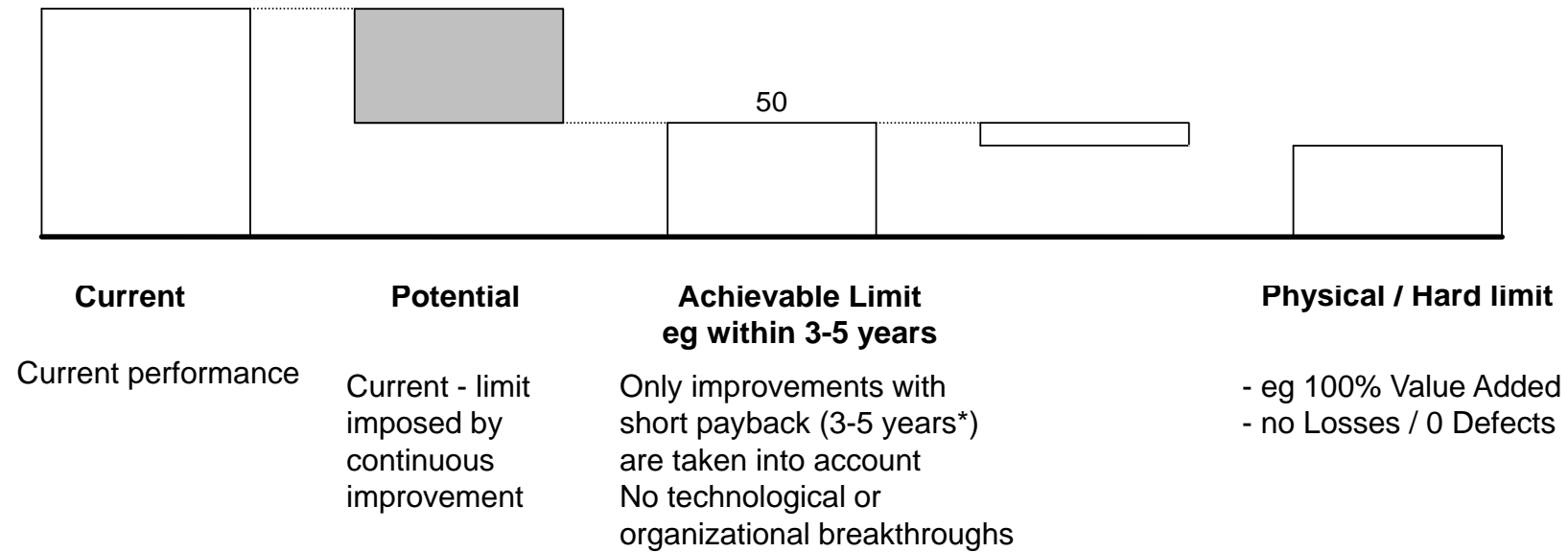


Target Setting using Half-Life

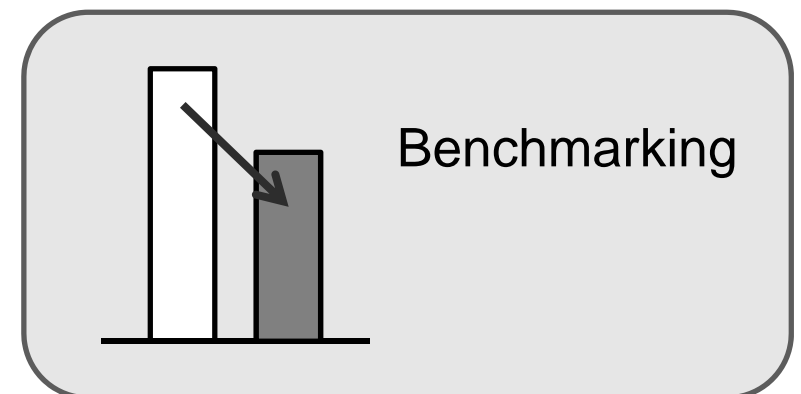
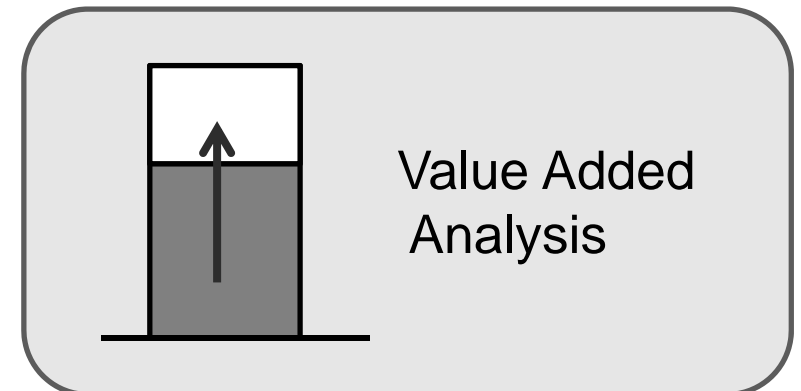
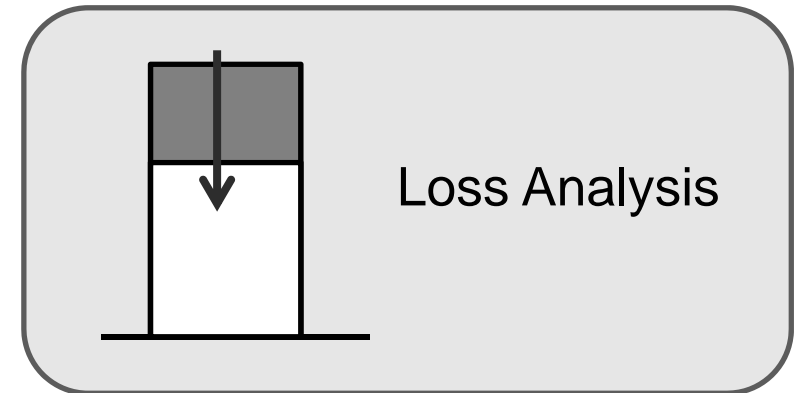
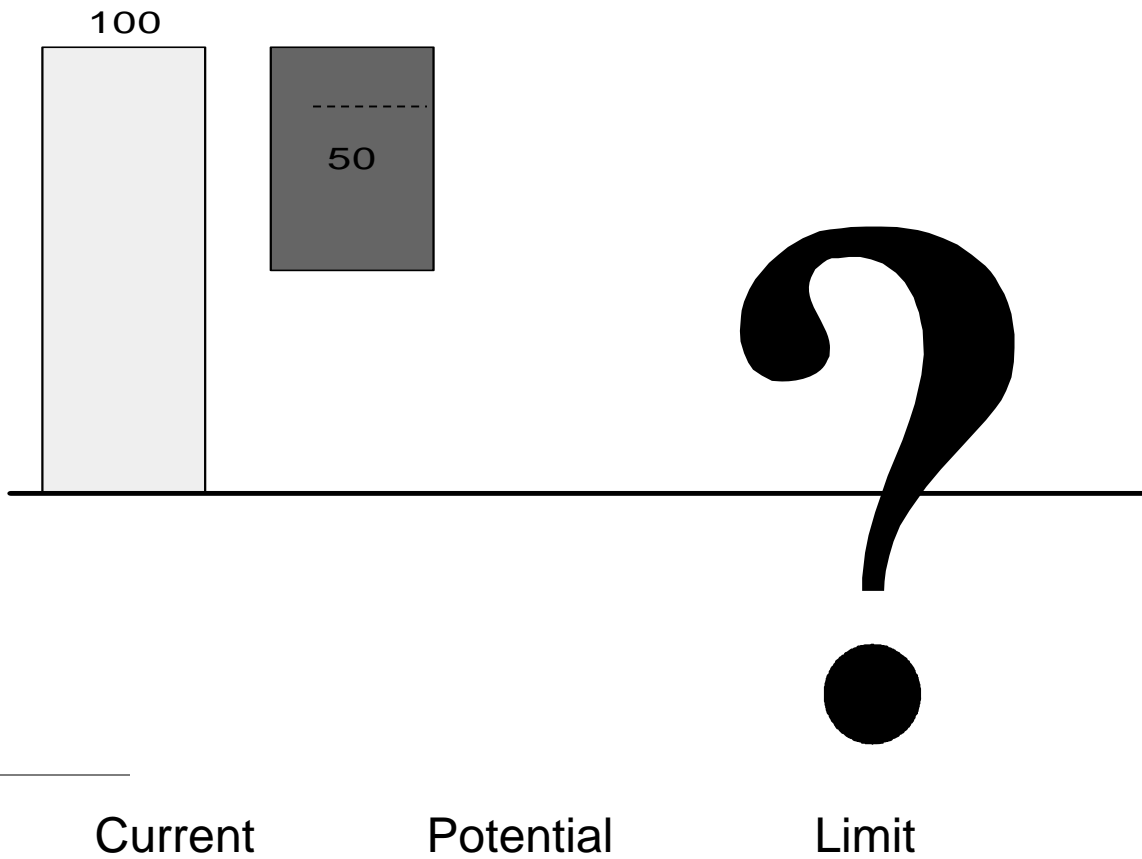
BASIC CONCEPT

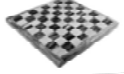
KPI's have a Half-Life typically of 1 to 2 years, hence 50% of the gap between the current situation and limit can be closed in, on average 1-2 years.

Typically:
 50% of the potential can be achieved in 1-2 years



First, the potential of each lever is evaluated in one of three ways – loss, value added or benchmark





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Hoshin Kanri will allow you to set and manage the strategic direction with aligned KPIs and SMART targets

Classic planning weaknesses

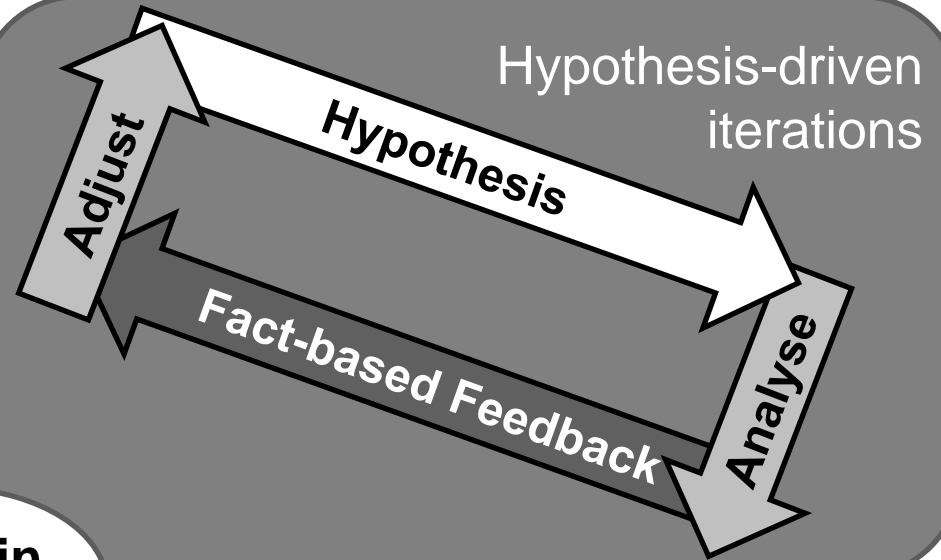
- Strategy = analysis
- Process:
 - Event-driven
 - Single process
 - Analysis / decision making focus
 - Interim reviews often weak, missing or punitive
- Breadth of application
 - Time-horizons often unsynchronized between levels
 - Limited cross-functional integration
 - Horizontal and vertical disconnects
- Target setting
 - Too many objectives
 - Unrealistic targets
 - Hidden assumptions and safety buffers at each level

Hoshin Kanri countermeasures

- Strategy = a process of hypothesis, analysis, feedback and adjustment
- Process
 - Process-driven
 - Iterative cycles
 - Consensus focus
 - Interim reviews repeat the iterative cycle
- Breadth of application
 - Clear time-horizons between levels
 - Cross-functional workshops
 - Extensive horizontal and vertical communications and linked plans to align organization
- Target setting
 - Objectives and priorities derived from strategy
 - Targets based on capability
 - Assumptions clarified

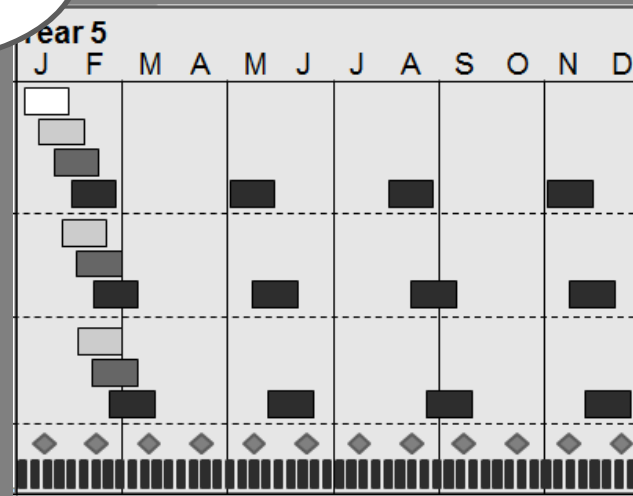
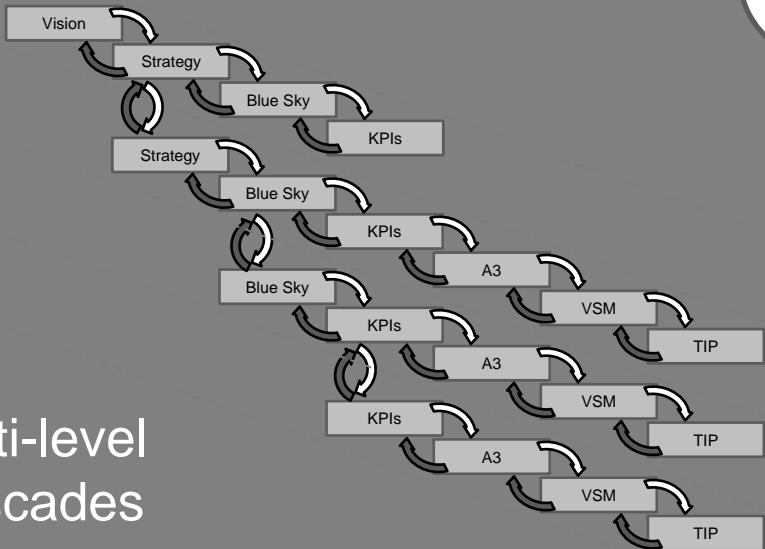
Timely, rigorous feedback cycles are hypothesis driven, using cross-functional workshops to ensure consensus

Cross-functional workshops

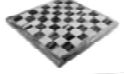


Hoshin Kanri

Multi-level Cascades



Defined time horizons



BACK UP
