

Why Aren't We Doing Hoshin Kanri at Our HE Institutions?

Lean HE Global Conference
October 20-22, 2021
University of Strathclyde (Virtual Host)

Bill Balzer

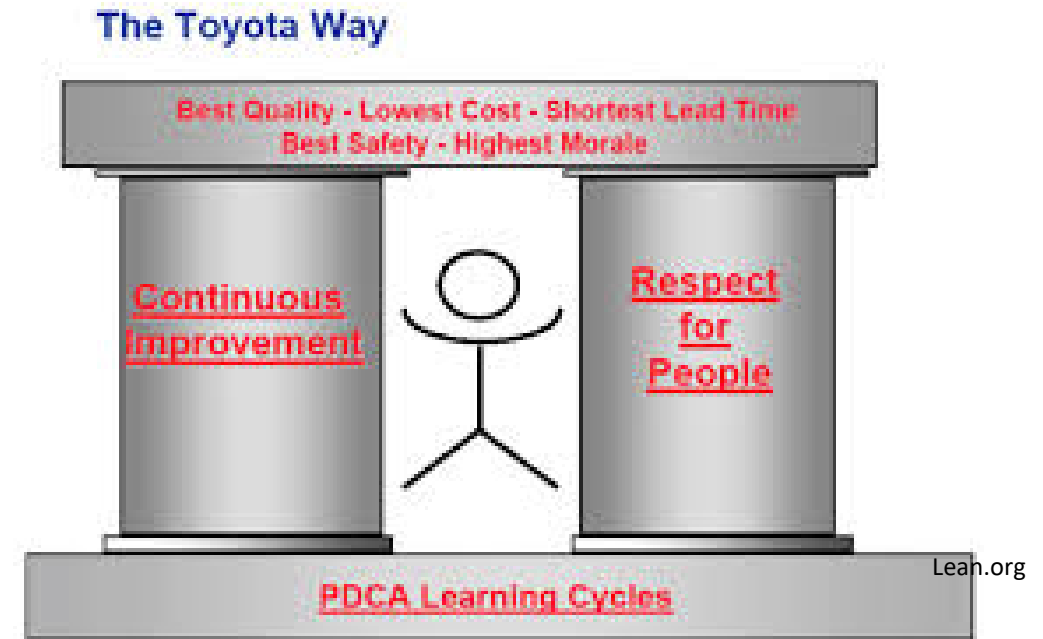
Bowling Green State University

Leanhighereducation.com



Opportunities for the Broad Application of Lean Principles and Practices in HE

- Rapid Improvement Event (Kaizen)
- 5S
- Daily Lean, 3C, Stand Ups, “Just Do It”
- Lean Meetings
- 3P (Production, Preparation, Process)
- Strategic Problem Solving, A3, PDCA
- Total Productive Maintenance
- **Strategic Planning Deployment (and control): Hoshin Kanri**



QUIZ (self graded):

**Name three of your
institution's strategic priorities**

BONUS:

For one strategic priority, list one or more targets that you review weekly to confirm your alignment and direct contribution to the success of the strategic plan

Why Strategic Planning Deployment is Needed

- 66% - 75% of large organizations struggle with execution
- 55% of middle managers can't name one of their company's top five priorities
- 50% of C-suite cannot connect the dots between strategic priorities, ... and only 16% for frontline supervisors and team leaders

Common Points of Failure in Strategy Deployment

- Vague or subjective goals that managers are mysteriously expected to know
 - Result: Manage in line with their own interpretations, own unit goals, or personal ambitions
- Strong vertical/hierarchical organization with no cross-unit process ownership
 - Result: No understanding of each other's needs, creates blame culture
- Limited communication and employee engagement
 - Result: Employees don't know how their jobs contribute to institutional success
- Post-planning exhaustion
 - Result: Limited accountability for implementation



Hutchins (2008)

RIE Failure: Downstream Effects Due to Failure in Strategy Deployment?

- Albliwi et al.'s (2014) systematic literature review documented a number of critical failure factors of Lean Six Sigma, including:
 - **Weak link** between the continuous improvement projects and the strategic objectives of the organization
 - **Misalignment** between the goal of the RIE and the goals of the organization (and beneficiary)

My Earnest Request: Shouldn't LHE Practitioners Do More?

- Is our LHE work supporting strategy deployment?
 - Do the LHE activities your office conducts align with your institution's strategic priorities?
 - Do our Daily Lean Stand Ups, Lean meetings, Structured Problem Solving, etc. incorporate progress on activities that align with our institution's strategic priorities?
 - Are the Rapid Improvement Events we facilitate for other areas aligned with our institution's strategic priorities?
- Isn't strategy deployment high level PDCA?
- Isn't strategy deployment (Hoshin Kanri) part of a Lean transformation?

Learning Goals

- What is Hoshin Kanri
- The Need for Hoshin Kanri in Higher Education
- State of Practice of Hoshin Kanri in Higher Education
- How LHE Practitioners Can Promote and Support Hoshin Kanri in Higher Education

“What starts with the loud voice of the CEO at the top becomes a faint whisper by the time it reaches the front lines of the organization where value of whatever description is created and where improvement becomes real.”

Womack (2018)

Set Aside (for Today!): Strategy Development in HE

- **Strategy is creating competitive advantage within an industry**
- Many HE strategic plans are similar (e.g., Improve undergraduate student success, retention and degree completion) and fail to articulate a competitive advantage
- **Lean tools and activities can support HE strategy development!**

Strategic Competitive Advantage for a HE institution:

*Reduce the time from “student application to admission decision” from two months to 24 hours
- shorter cycle time than competitors will increase our market share and grow enrollment*

Learning Goal #1

What is Hoshin Kanri

Hoshin Kanri: Strategic Planning Deployment

- **Hoshin Kanri is the translation of a high-level strategic plan into sustainable results at all levels of the institution**
- Four components (and many definitions!)
 - Ho: Direction Shin: Focus
 - Kan: Alignment Ri: Reason
- Together
 - Hoshin: “direction” “compass needle”
 - Kanri: “management/administration” “control”

方針管理

hoshin kanri
Direction management, control

North Star: “A Ship in the Storm Going in the Right Direction” (Dennis, 2021)

Hoshin Kanri: Engaging People in Strategy Deployment

X Matrix: One-page visual representation of priority alignments, metrics, and accountabilities

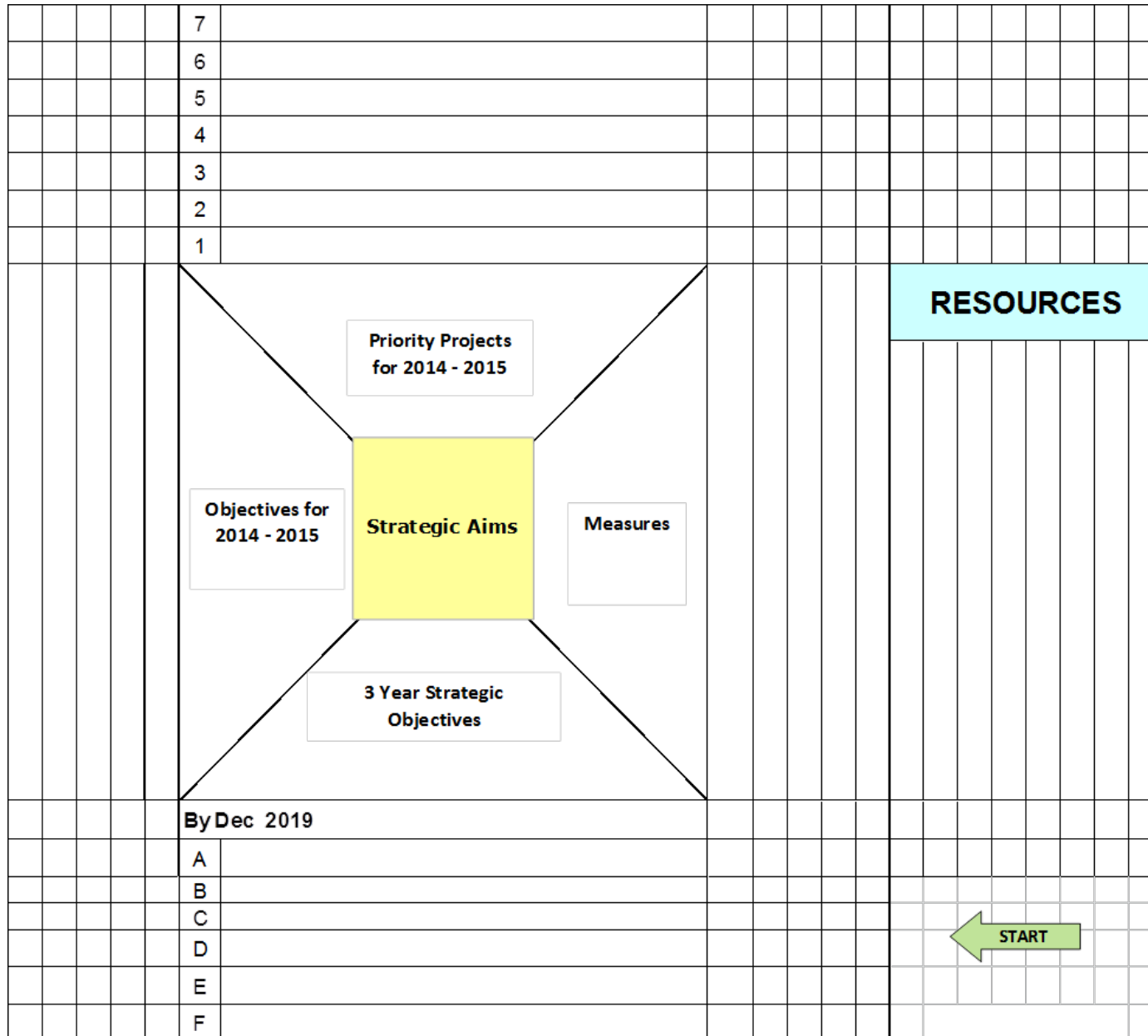
Catchball: Alignment by tossing ideas back and forth at each level, asking what can be done to achieve strategy, where there might be problems, and what commitments are needed to address problems

A3/PDCA: Scientific process applied to determine cause and conduct experiments to close the gap between standards and what is occurring

30/60/90: Plan that lays out clear courses of action at every level to ensure activities align with strategy

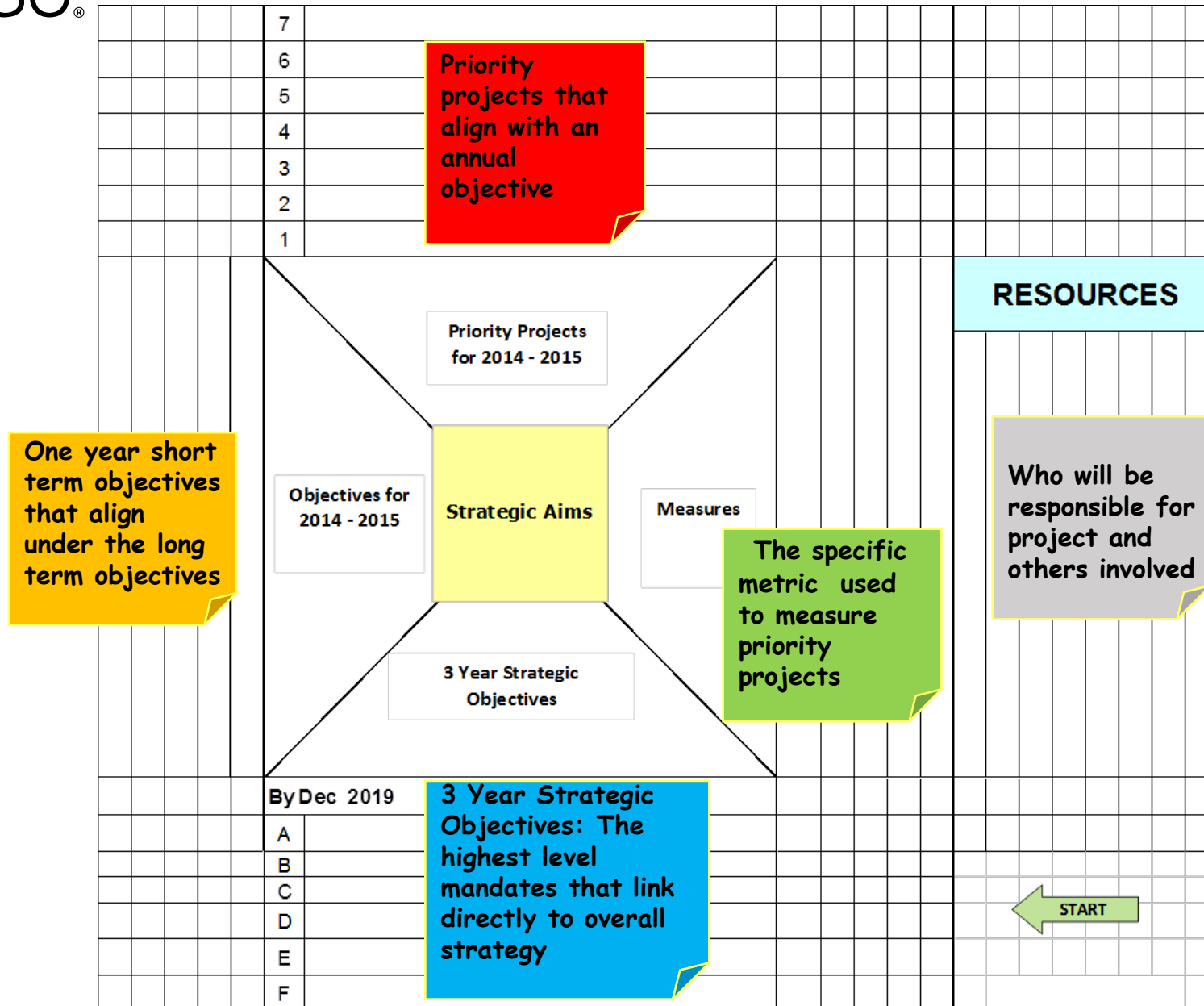
Kanban Board: Track progress against standards established by strategy deployment; deviations from an expected result in action plans are problems to be solved

Respect for People: Capitalize on vast knowledge of employees at all levels; provide general direction but allow employee/unit latitude to formulate local plans (“implementation to point of impact on the beneficiary”)



**You: What
is an X
Matrix?**

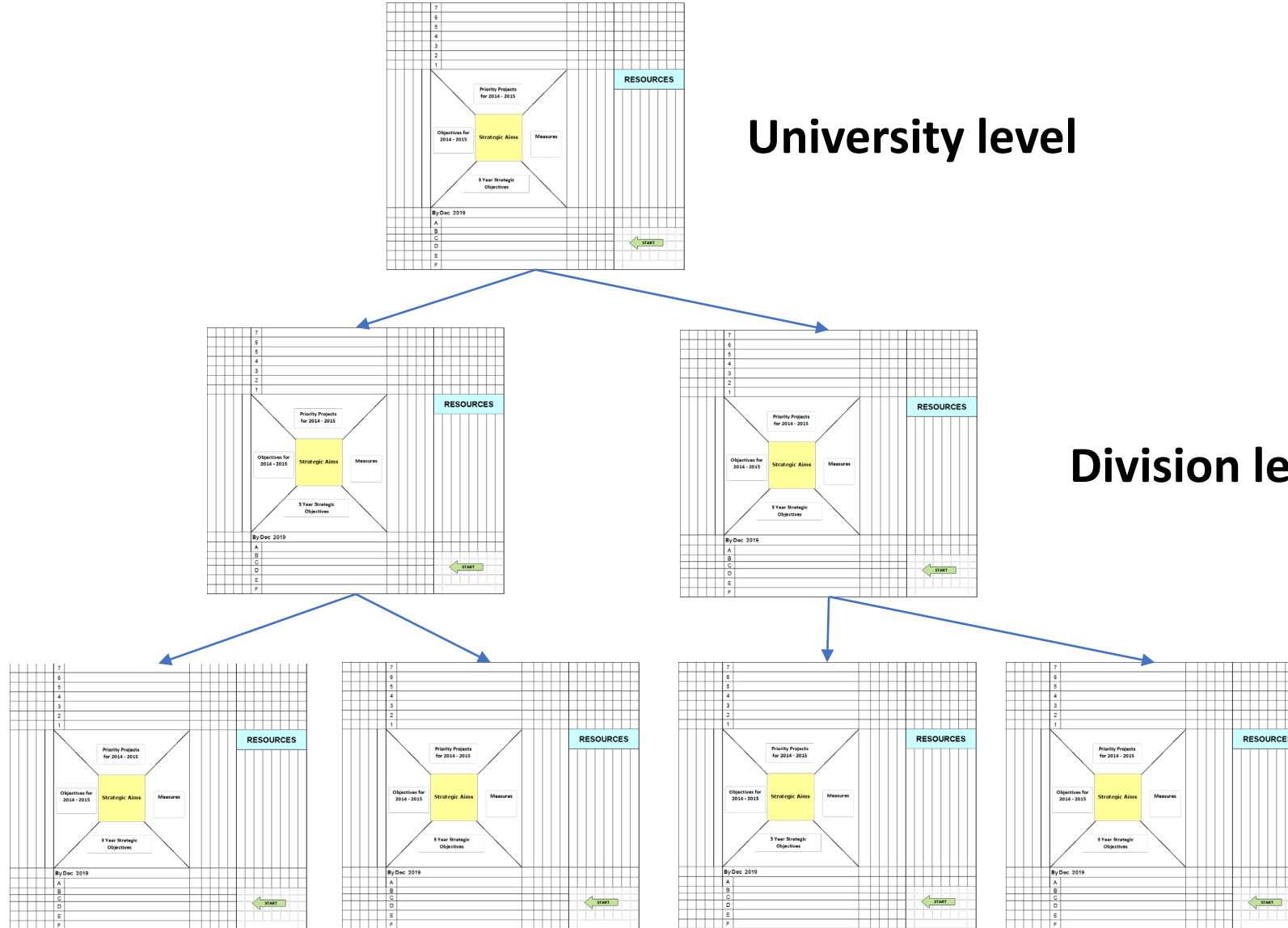
**Me: A
single-page
visual
strategy
deployment**



**You: Yikes,
this is
daunting!**

**Me: Let me
show you
your way
around the
X!**

Richards and Savage (2015)



Hoshin Kanri Strategy Deployment: Linking X Matrices Across Institutional Levels

Unit level

Hoshin Kanri and Pillars of Lean

- **Continuous Improvement**
 - Creates common goals and clarity on how each employee contributes
 - Clear well-defined structure of roles, responsibilities, and metrics that can be managed for improvement
- **Respect for People**
 - Each employee is the expert in their own job whose views matter and are respected
 - Invest in employees and leverage job knowledge and creativity

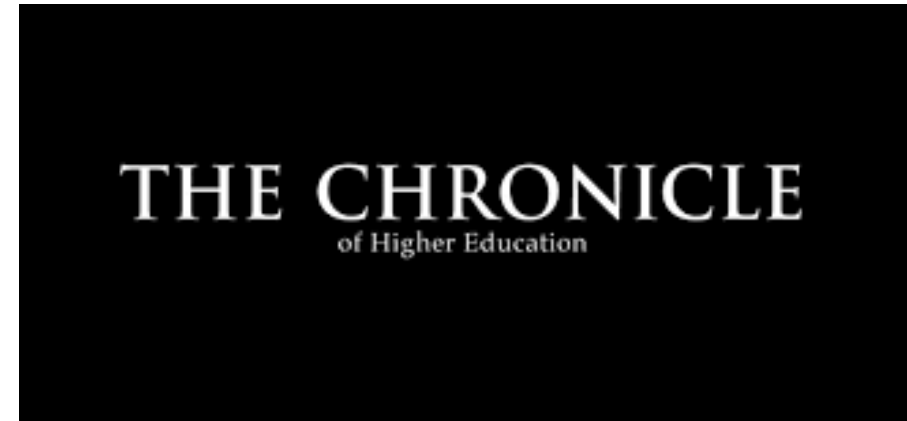
Learning Goal #2

The Need for Hoshin Kanri in Higher Education



Strategic Planning (and Deployment) Needed in HE

- Turbulent, dynamic HE environment
 - COVID-19
 - Demographics
 - Competition
 - Cost
 - Funding
 - Accountability
- HE falling short of its mission
- HE institutional closings, consolidations, crises



5 Ways Higher Ed Will Be Upended: Colleges will lose power, prices will go down, and credentials will multiply – among other jarring shifts.

Levine & Van Pelt, Aug. 25, 2021

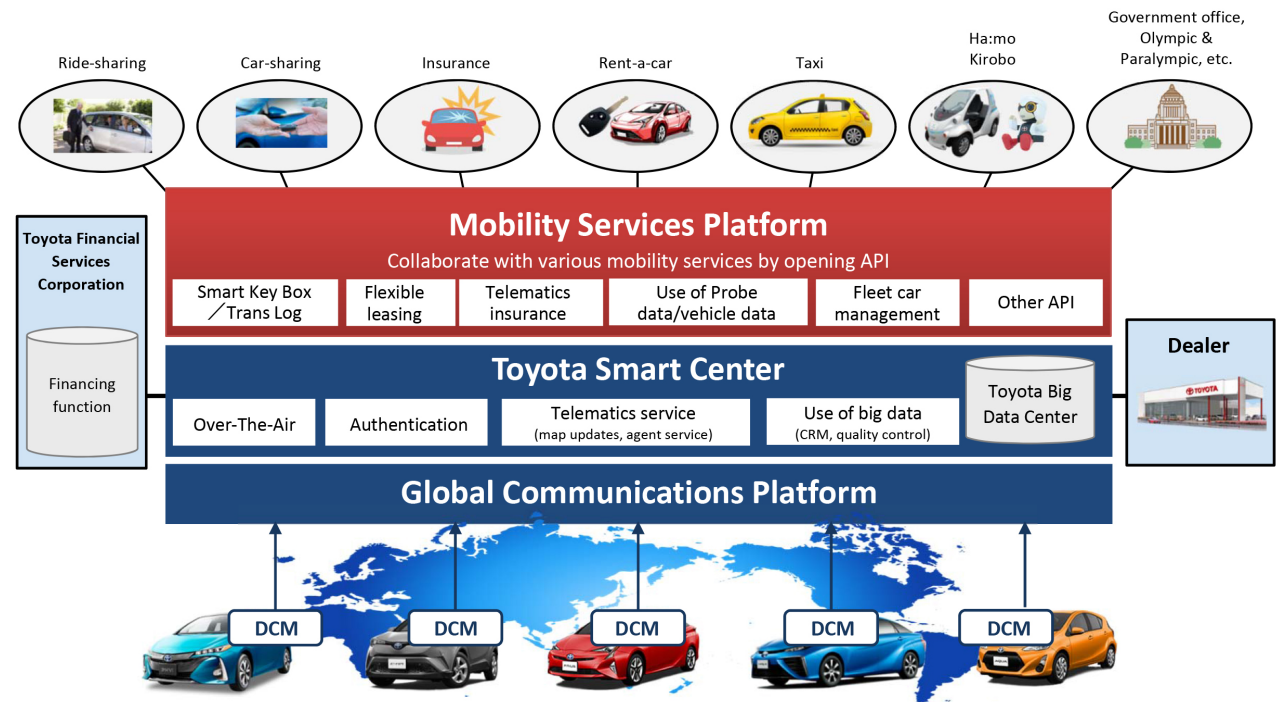
Are HE Strategic Plans Effectively Deployed?

- Inactive (sits on shelf)
- Active (mentioned occasionally)
- No straight line from strategy through implementation (point of impact)
- Limited accountability
 - No Metrics
 - No Timeline
 - No Milestones
 - No Owner



In Contrast: Hoshi Kanri – Toyota Style

- Once-in-a-century disruption from “Auto Industry” to “Mobility Industry” (Mobility 2.0)
- Simultaneous emergence of
 - Autonomy
 - Alternative Energy
 - Shared Assets
 - Hyper-Connectivity
 - Changing Rules of Trade



Womack, J. (2018)

Toyota Response: Strategy Hoshin

- **Expanding concurrent engineering from individual vehicles to whole mobility systems**
- **Toyota experiments**
 - Pioneering solid-state batteries AND hydrogen fuel cell vehicles
 - Partnerships with ride hailing and logistics firms
 - Toyota fleets of shared, autonomous vehicles (2021 Olympics)
 - Application of TPS principles to development of software packages to support these innovations
- **Expend massive sums for lengthy experiments (and many may fail) while defending its current employees**

Toyota Response: Kanri Deployment

- **“Connect the dots” for the value-creating front-line workers**
- **Create financial resources to support the respond-to-disruption hoshin**
 - Increase production rate with no capital spending
 - Sustaining world-best quality
 - Rethinking every aspect of the whole production activity (Jishuken: broader scope over an extended period of time)
 - Reducing the number of workers required on the line (in response to labor shortages and declining birth rates)
- **Long Term: Toyota survival and defend jobs**

Learning Goal #3

State of Practice of Hoshin Kanri in Higher Education



College



Brief Mentions of Hoshin Kanri HE

- Ahmed (2016)
 - A literature review that culminated in a proposed (and cursory) Hoshin Kanri model for HE institutions
- Emiliani (2004)
 - Hoshin Kanri, a Lean tool/process, can be used to determine which business courses should be offered in response to challenges (e.g., business school focus, professor capabilities, accreditation standards, value expectation of students or employers)

Limited Applications of Hoshin Kanri HE

- Istanbul Technical University (Asan & Tanyas, 2007)
- University of Warwick (Roberts & Tennant, 2003)
- Cardiff University (Sarah Richards & Eva Savage, 2015)
- Michigan Technological University
- Bowling Green State University
- Owens Community College
- Lean HE Europe Steering Group





Istanbul Technical University

(Asan & Tanyas, 2007)

- Limited evidence of Hoshin Kanri in HE
- Presents integration of Hoshin Kanri (process based) with Balanced Scorecard (performance based) for strategic management/deployment
- Illustrates using HE engineering management graduate program
 - Catchball (across two levels) for alignment and integration of strategies before reaching implementation plan
- No discussion of implementation

University of Warwick

Roberts & Tennant (2003)

- Warwick Manufacturing Group Quality & Reliability Team's five-year "strategic intent, stretch goals"
- Iterative "catchball" process to connect "vital few" goals (e.g., increase publication rate) with key processes of research, teaching, and consulting
- Monthly reviews (progress against the plan)
- Annual review (appropriateness of vision and vital few goals, progress against milestones, new milestones, confirm individual commitment)

Figure 3 Relationship between key processes and team goals

Team Goals							
		Increase publication rate	Obtain research funding	Innovate in our teaching methods	Grow our consultancy	Develop our professional/academic standing	Develop forums for industrial contact
Research	Primary and secondary research					●	
	Networking with academic and business organisations					●	●
	Developing research proposals		●				
	Disseminating results	●					
Teaching	Mentoring student projects	•					
	Design and delivery of training			•		•	○
	Development of teaching methods			●			
	Assessment of students	○		○		○	
	Module tutorship			○		○	○
Consulting	Skills identification and development				•		
	Establish market presence				●		•
	Diagnostic evaluation				•		
	Allocation of resource				○		
	Bid acceptance process				•		
	Terms of reference				○		
	Delivery and review				●	●	
	Disseminating results	●					



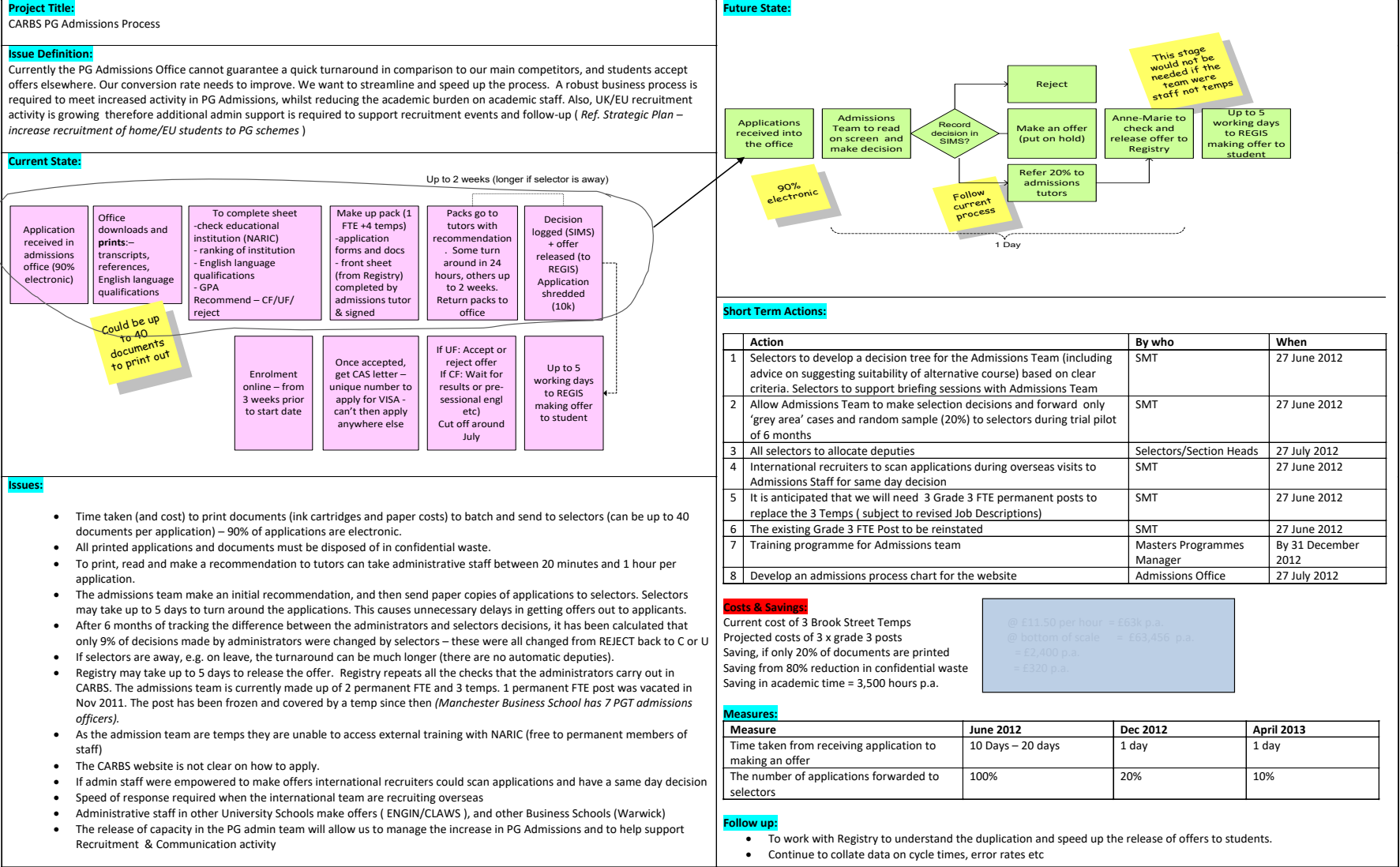
Cardiff University

(Sarah Richards, personal communication, August 25, 2021)

- Hoshin Kanri proposed to prioritize and track (a too large) large number of university projects
 - X matrix “reverse engineered” from existing strategic plan to provide visualization and the need to prioritize in Year 1, Year 2, etc.
 - Strong support for concept, but no change in practice (due to longstanding culture and new leadership)
- Pivot: from university-wide to local applications (e.g., improve the speed and quality of admissions process)
 - X matrix with 3-year strategic objectives, more targeted objectives for next 6-months, and prioritized projects
 - Each priority project in X-matrix linked to a “living” A3 describing current and future states, issues to be addressed, short-term actions, targeted improvements, and costs and savings



Cardiff U A3: Project to Improve Admissions Experience of Overseas Students

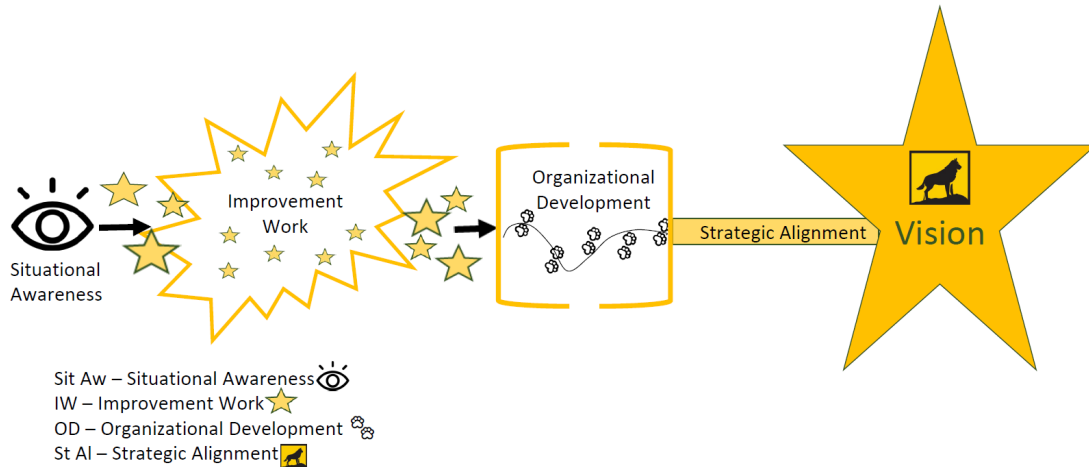




Michigan Technological University

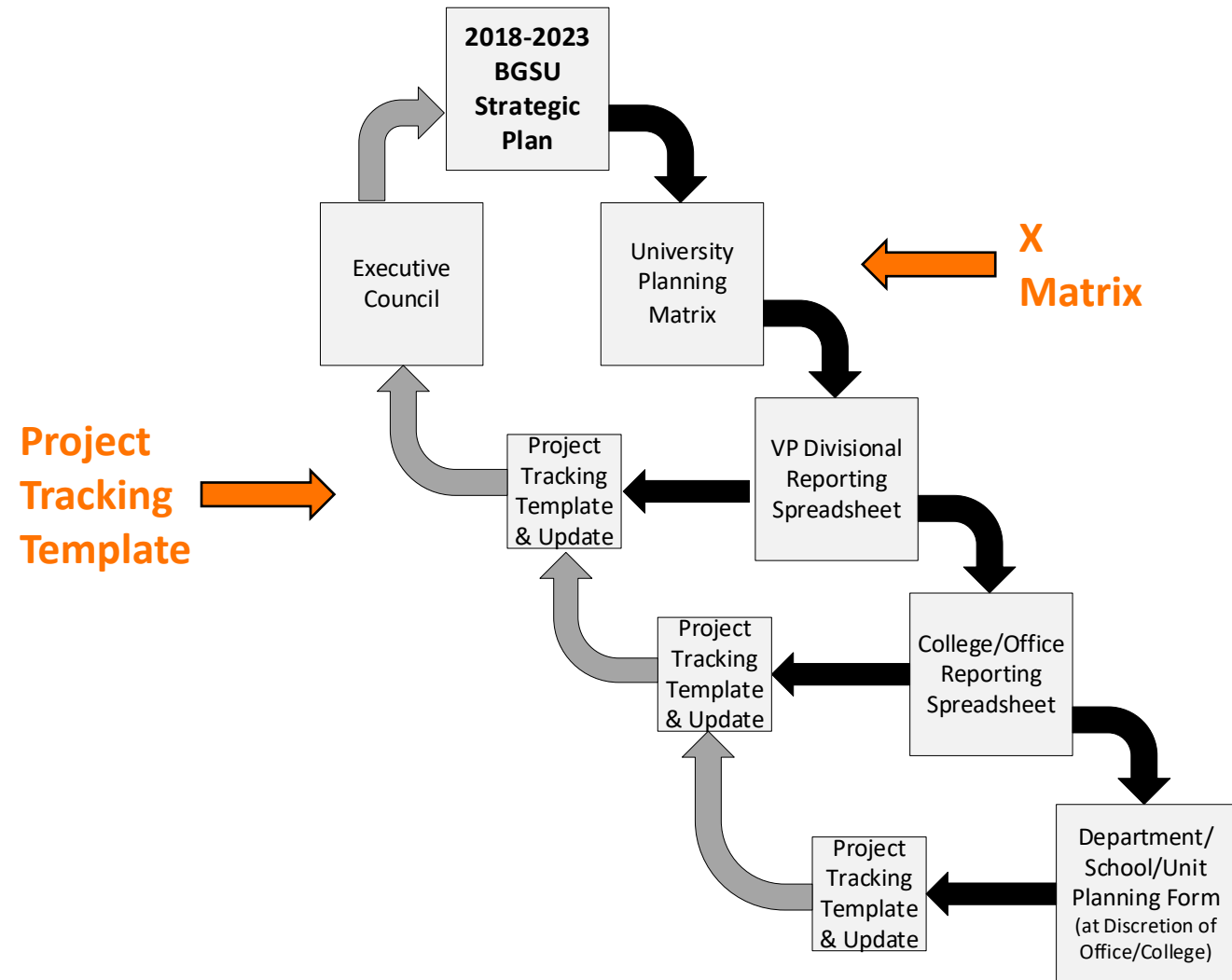
(Ruth Archer, personal communication, July 20, 2021)

Implementing the Administration Operating System AOS



- AOS annual themes and initiatives based on university strategic plan and visioning categories championed by AVP Theresa Coleman-Kaiser
- Units create goals for each theme (separate A3 for each theme)
- Director/Manager develops annual performance goals based on unit's A3 theme goals
- Separate monthly meetings to discuss unit A3 goals and individual performance goals

Bowling Green State University: Strategy Deployment Process (Balzer)





BGSU Project Tracking Template

2019-2020 Priority Initiative Project Tracking Template				Approved Template - April 11, 2019		
2019-2020 Priority Initiative:		1.3 Add Programs in High Demand		Date Created:	6-Mar-19	
Project/Action Background:		Add or enhance academic programs in areas of workforce demand such as in health care (e.g., nursing), applied STEM (e.g., data science, software engineering), and hospitality. Focus on programs that build on current BGSU faculty/programs that can be implemented in next 18-24 months.				
Responsible Lead:		Joe Whitehead		Team:	Deans, UG and Grad Admissions, Institutional Effectiveness	
WHAT actions/steps need to be accomplished to achieve this strategic priority initiative?		WHO will be responsible for making sure this action/step is accomplished?		WHEN will the action/step be started and completed?		What key metric(s) will be used to assess progress on this action/step?
				Started	Completed	Progress (G/Y/R fill)
Identification of workforce demand areas	Julie Matuga	1-Jul-19	1-Oct-19	Comprehensive list of high demand programs		
Specify criteria for programs to be considered (alignment with BGSU, startup costs, timeline to implement, etc.)	Provost and Deans	1-Jul-19	1-Nov-19	etc.		
Action C	Person X					
Action D						
etc.						



Owens Community College 2019-2022 Strategic Improvement Goals and Key Objectives:

30/60/90 Plan – A Small Section! (Balzer)

Strategic Improvement Goals and Key Objectives		Lead	Dec-20		Jan-21		Feb-21	
Enrollment, Completion & Student Success	1.1 Actively manage enrollment and drive increases in targeted student populations	AG		Target transfer in student population for Spring 2021 (4 year students)	Onboard new Assistant Director, Admissions	Begin SEM and Marketing external consultant partnerships to drive enrollment	SEM Plan development begins Launch partnership to drive returning student enrollment	Kick off for ReUp (Records/IT/IR/Etc.)
	1.2 Improve student retention and completion	AG	Finish upgrade to new version of Degree Works and training Advising staff (IT/Records)	Video to Celebrate Summer and fall Graduates	Onboard new Athletic Director	"Finish for Your Future" taskforce recommendations to leadership team	Communication plan for students re: degree check list	
	1.3 Measure and improve post-college success	DS	Finalize completion plan	Submit completion plan to BOT and state		Select completion plan priorities and implement pilots	Review next steps for Math redesign (Stats and Emporium)	
	1.4 Create pathways to success to serve all students	DS	Finalize completion plan			Review and establish options for year long schedule	Complete external audit of computer science/IST programming	Expansion of FYE materials to FYE class for a fall start. Have first draft of degrees to be all online.



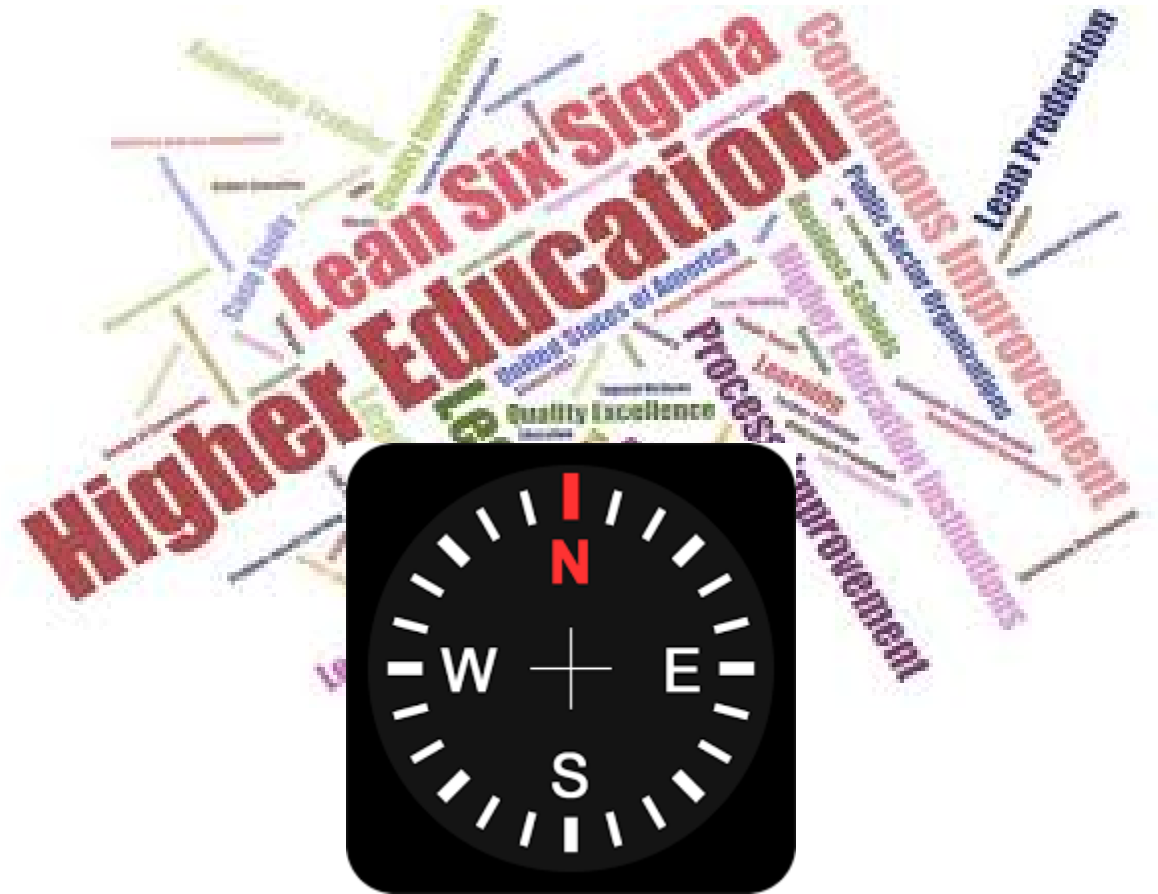
Lean HE Europe Steering Committee

(John Hogg, personal communication, June 17, 2021)

Lean HE Europe						X-MATRIX		version June 2021									
										L= IN THE LEAD				M= WORK / SUPPORT			
X						MM/LS	Introduce a Buddy system for new & emerging network leads			X							
				X		JM	Joint post-degree studies (hybrid/online?) for HE leaders ERASMUS Plus				X						
	X		X		X	JH/JM	Develop shared approach to gather members interests and wants - e.g. single survey			X							
	X	X			X	SAT/AB	Development of Social Media /Communication Plan/Strategy to help increase visibility of Lean HE										
	X				X	JH/S											
X					X	MS/CvH	Create a set of standard materials and templates to support new and emerging networks			X							
				X	X	MM/DB	Seminars/Masterclasses delivered by individual networks / EU - inviting other Euro networks			X	X						
X				X	X	JM	Organise a cross-network workshop on approach to lean in academic processes, teaching and research			X	X						
				X			Developing the program for professors/ students Lean Professor/Lean Student/Lean Education										
MS / CvH	SAT	JH	JM/MI	JH/LS	MM/DB		Improvement initiatives		JH		MM		HR				
Develop the capacity to help a new network form and develop traction	Enable sharing (know	Lean HE International the s	Further developing & the s	Design a new future in-person/virtual/ly	Develop & promote an approach for individual networks to work collaboratively across networks	(S) 2-3 YEARS	MISSION VISION	MEASURES / KPIs	Number of workshop co	Number of new network	In next 12 months, have numbers attending and	Number of impact Case	Number of new instituti	Number of new instituti			
							Social Responsibility		Lean HE Europe colleagues	Lean HE Europe each year	across Europe - measure	the Lean HE Europe website	Average each year and/or				
							1										
							STRATEGIC GOALS (3-5 YRS) (JH)										
	X		X	X			1) Promote Lean activities, and the impact they have, across the European Continental Division highlighting		X	X	X	X					
X				X			STRATEGIC GOALS (3-5 YRS)		X	X			X				
X				X	X		support to help build and expand existing networks within the Division		X	X							
														THE TEAM			

Learning Goal #4

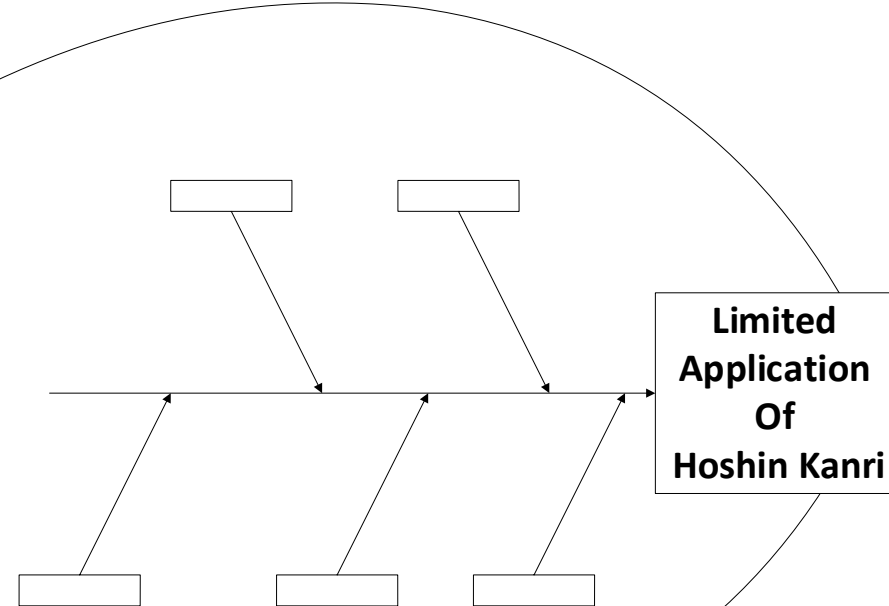
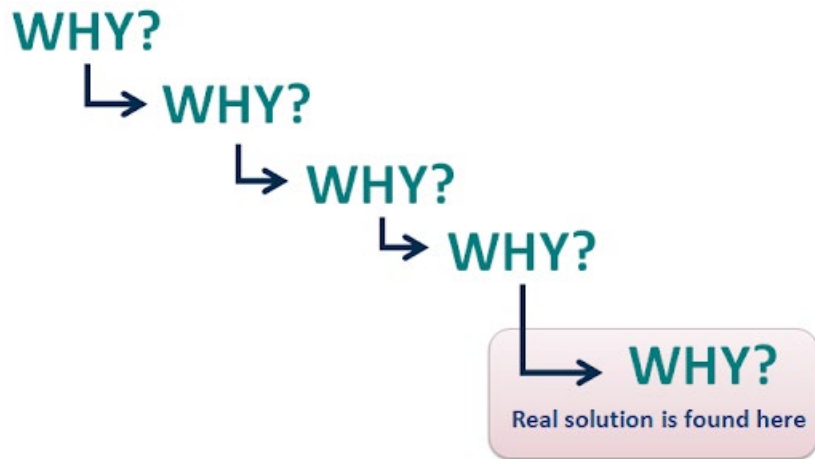
How LHE Practitioners Can Promote and Support Hoshin Kanri in Higher Education



Why Aren't We Doing Hoshin Kanri at Our HE Institutions?

- The success of HE demands strategic planning and deployment – Hoshin Kanri is the ultimate “PDCA continuous improvement cycle” and “gap analysis”
- Hoshin Kanri is in our “Lean wheelhouse”
- Institution-wide implementation is not needed to benefit from Hoshin Kanri
- Why a limited role for LHE in strategy deployment (when Lean has so much to offer)?
- **Assuming LHE practitioners want to be part of the strategy deployment process, how can the process be improved?**

Can Root Cause Analysis Offer Insights Into the Limited HE Application of Hoshin Kanri?



Some Preliminary Thoughts



Address Root Causes of Limited HE Application of Hoshin Kanri

Root Causes	Corrective Actions
LHE Practitioners have no Hoshin Kanri training or experience	<ul style="list-style-type: none">- Grow our own experts- LHE Global workshops on Hoshin Kanri- Find a Hoshin Kanri teacher- Add Hoshin Kanri to LHE application tool kit
HE Leaders have no knowledge of Hoshin Kanri	<ul style="list-style-type: none">- Get a seat at the (strategy deployment) table- Hoshin Kanri “elevator speech”- Expose leaders to Hoshin Kanri practices (including other organizations)
Planning Process has multiple owners	<ul style="list-style-type: none">- Division- or unit-level Hoshin Kanri (early adopters or pioneers)- Resolve the strategy deployment “pain point”- Build, test, and improve “standard work” policy deployment process
HE Environment embraces home grown approaches to planning	<ul style="list-style-type: none">- Conduct “proof of concept” Hoshin Kanri demonstrations- Demonstrate the benefits of catchball, X matrix, A3, 30/60/90, etc.

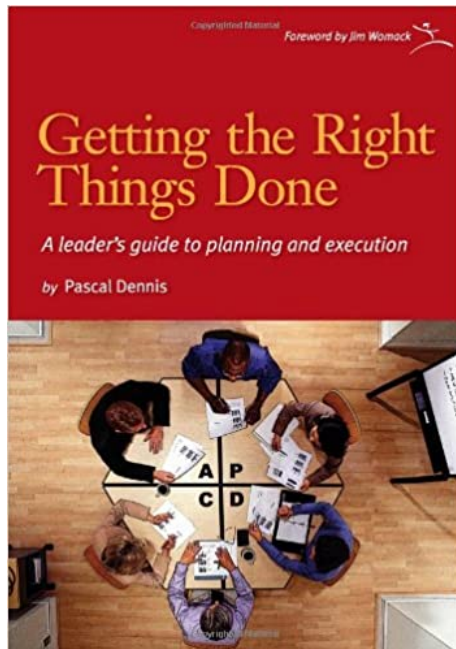
Hoshin Kanri - An Important Opportunity for Lean HE Practitioners

- HE will continue to face significant challenges
- Challenges can be addressed with strategic plans
- HE needs to improve deployment of strategic plans
- Hoshin Kanri is built on Lean pillars of continuous improvement and respect for people
- Hoshin Kanri is readily applicable to HE
- Lean HE practitioners can add great value by promoting and implementing Hoshin Kanri

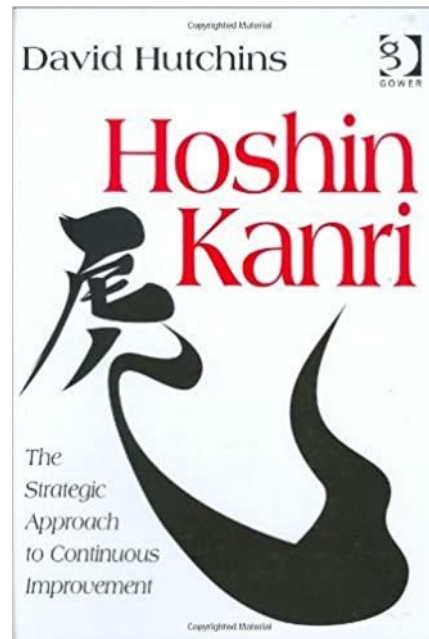


Some Helpful Resources for Practitioners: Three Books to Add to Your Library

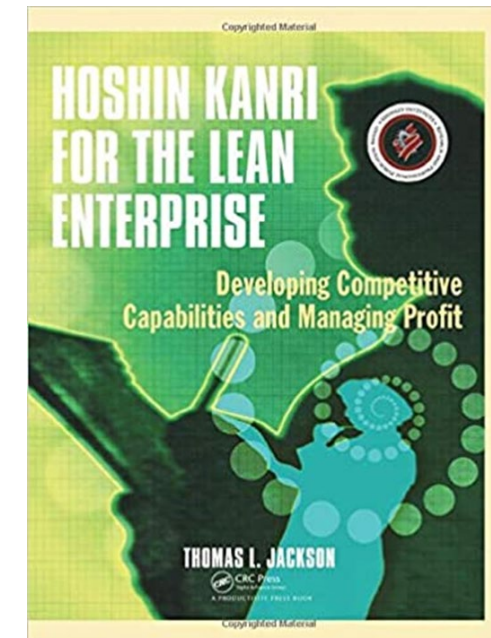
Pascal Dennis (2009). Not HE, but a fictitious case study as a guide through the planning and execution process



David Hutchins (2008). Not HE, but a detailed model from vision through deployment as well as documenting implementation

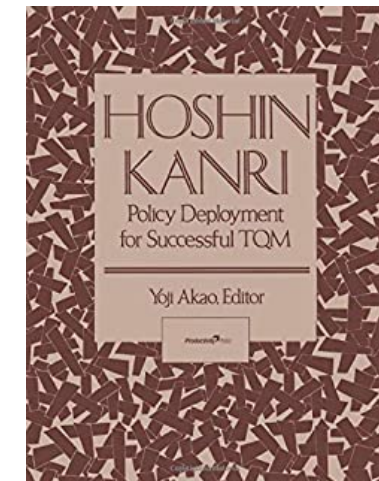
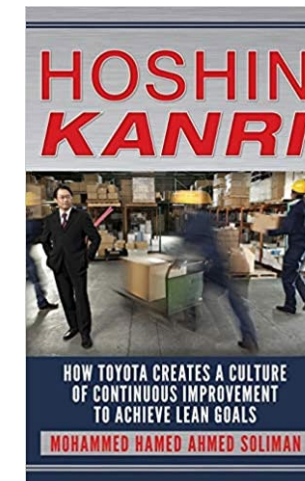
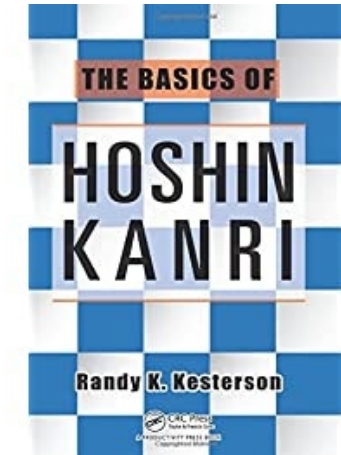
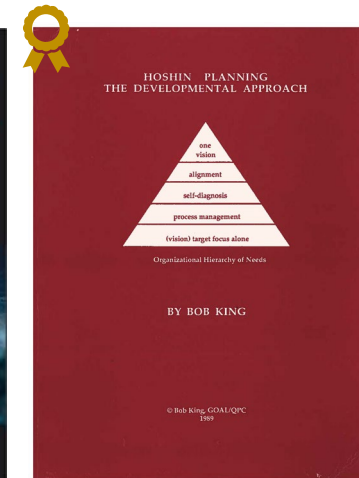
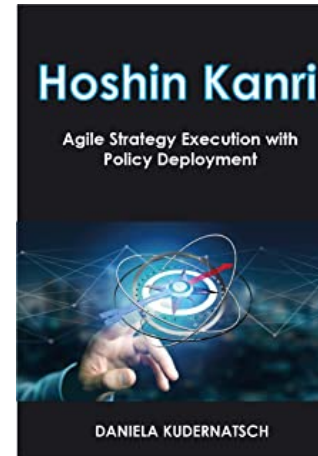


Thomas Jackson (2006). Not HE, but useful and easily applicable. Includes forms and templates



Some Additional Helpful Resources

- Bob King (1989). Not as practical but one of the very early books
- Joseph Colletti (2013). Convenient “Memory Jogger” reference and pocket guide
- The Lean Post. Many articles, compliments of the Lean Enterprise Institute
<https://www.lean.org/LeanPost/>
- Sarah Richards and Eve Savage have a nice set of slides on the X matrix and how it works (from their 2015 Lean HE Hub presentation). Contact them or me if interested in a copy



References

- Ahmed, H.O.K. (2016). A proposed systematic framework for applying hoshin kanri strategic planning methodology in educational institutions. *European Scientific Journal*, 12(16), 158-194.
- Albliwi, S., Antony, J., Lim, S.A.H., and van der Wiele, T. (2014). Critical failure factors of Lean Six Sigma: A systematic literature review. *International Journal of Quality & Reliability Management*, 31(9), 1012-1030.
- Asan, S.S., & Tanyas, M. (2007). Integrating hoshin kanri and the balanced scorecard for strategic management: The case for higher education. *Total Quality Management*, 18(9), 999-1014.
- Colletti, J. (2013). *The Hoshin Kanri Memory Jogger: Process, Tools, and Methodology for Successful Strategic Planning*. Salem, NH: GOAL/QPC.
- Dennis, P. (2006/2009). *Getting the Right Things Done: A Leader's Guide to Execution and Planning*. Boston, MA: Lean Enterprise Institute.
- Dennis, P. (March 24, 2021). Once more: What is strategy deployment, and why should you care? *The Lean Post*. <https://www.lean.org/LeanPost/Posting.cfm?LeanPostId=1383>
- Emiliani, M.L. (2004). Improving business school courses by applying lean principles. *Quality Assurance in Education*, 12(4), 175-187.
- Hutchins, D. (2008). *Hoshin Kanri: The Strategic Approach to Continuous Improvement*. London: Gower/Routledge.
- Jackson, T.L. (2006). *Hoshin Kanri for the Lean Enterprise: Developing Competitive Capabilities and Managing Profit*. Boca Raton, FL: CRC Press/Taylor & Francis Group.
- King, B. (1989). *Hoshin Planning: The Developmental Approach*. Methuen, MA: GOAL/QPC.
- LaHote, D (January 28, 2015). What strategy is and what it's not. *The Lean Post*. <https://www.lean.org/LeanPost/Posting.cfm?LeanPostId=357>
- Levine, A., & Van Pelt, S. (August 25, 2021). 5 Ways Higher Ed Will Be Upended: Colleges will lose power, prices will go down, and credentials will multiply – among other jarring shifts. *The Chronicle of Higher Education*. <https://www.chronicle.com/article/5-ways-higher-ed-will-be-upended-in-the-decades-to-come>
- Nijdam, W. (June 24, 2014). How to deploy hoshin kanri successfully. *Planet Lean*. <https://planet-lean.com/a-guide-to-practical-hoshin/>
- Richards, S., & Savage, E. (September, 2015). Aligning all the stuff that needs to get done. Presented at the Lean HE Hub Conference, University of Waterloo, Ontario CA.
- Roberts, P. & Tennant, C. (2003). Application of the hoshin kanri methodology at a higher education establishment in the UK. *Total Quality Management*, 15(9), 82-87.
- Womack, J.P. (August 3, 2018). The cascade of hoshin. *The Lean Post*. <https://www.lean.org/LeanPost/Posting.cfm?LeanPostId=922>

My Thanks - and Your Questions & Comments

I will post my presentation at leanhighereducation.com

Want to chat? wbalzer@bgsu.edu

And all of our thanks to John Hogg,
U Strathclyde, and  LeanHE

