

Second Edition

LEAN HIGHER EDUCATION

Increasing the Value and
Performance of University Processes

Companion Guide

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Companion Guide to

*Lean Higher Education:
Improving the Value and Performance of
University Processes (2nd Ed.)*

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The decision to read a book is a significant investment of time and energy. As we know from both personal experiences and the research on learning, different approaches to reading can affect the level of benefit that can come from that commitment. For example, reading superficially without note taking or reflection may limit the amount of learning that occurs and the actionable ideas you might bring back to the workplace. Therefore, supplemental materials that guide your reading and promote a deeper understanding of the book can enhance the overall value from the reading experience.

The goal of this companion guide is to help you get the most out of your reading of *Lean Higher Education: Improving the Value and Performance of University Processes (2nd Ed.)*. We designed these materials to support your deeper understanding and application of LHE whether you are reading the book (a) from cover to cover or select chapters; (b) reading it alone, as a member of a workplace reading group, or as a student in a classroom; (c) facilitating discussions of the chapters in the book; or (d) seeking guidance as you begin your own personal Lean Higher Education (LHE) journey.

Your companion guide begins with some general tips on how to read for deeper understanding and to expand your technical knowledge, skills, and abilities.¹ Supplemental materials for each chapter follow to engage more active learning. The chapter materials all have a common organization:

Learning Goals. A short description of the key learning goals of that chapter.

Preflection. Questions or activities to pre-reflect on as you prepare to read the chapter. These are designed to draw from your personal experiences and/or current knowledge to provide a context for the material covered in that chapter.

Connection. Questions or activities to help deepen your understanding of the material with and among the key concepts included in the chapter. These are designed to focus and reinforce learning on important LHE principles and practices.

Reflection. Questions or activities to help apply the chapter materials to your own higher education workplace or experience. These are designed to help you consider the potential opportunities and benefits of LHE to your personal situation.

A broad set of questions/activities are included for the sections on pre-reflect, connection, and reflection. The variety of alternatives are offered to help ensure that some subset of each will be pertinent to your particular purposes and circumstances. Choose those that speak to you.

We hope you find this companion guide helpful. With our backgrounds in applied psychology, we drew from the professional literature on learning and integrated best practices from the field in this guide. We also applied Lean principles and practices in the development of this guide (e.g., voice of customer, standard work, team charter, visual mapping, coaching kata, running experiments, brainstorming, reflection). For example, we gathered “voice of customer” data from participants in a workplace reading group which we used to inform the design of this companion guide. We also gathered “continuous improvement” feedback from a university’s senior leadership team exploring the application of Lean Higher Education (LHE).

¹ You may find this advice helpful when reading other books, technical reports, and other narrative materials.

Thank you for allowing us to walk with you on your Lean journey. There is so much to take in, and the experience is better when you share it. As noted in Appendix A in the book, there are a wide variety of additional resources available to expand your understanding of LHE and support its development and implementation. For your convenience, clickable web links to these appendix resources may also be found at leanhighereducation.com. We encourage you to seek out Lean-minded people and form a community of practice. We are better together.

Ruth and Bill

General Advice: How to Get the Most Out of Your Reading

Apply active reading strategies before, during, and after reading a chapter.²

Strategies you might consider before you read. Instead of jumping right in and reading the chapter, preview the chapter materials ahead of your reading. Some recommendations to consider include: know your purpose or goal for reading the chapter; scan titles, headings, and subtitles; read the end of chapter summary; skim tables, figures, and special interest boxes and notes in the margin; and preview the prelection, connection, and reflection questions found in this companion guide before reading.

Strategies you might consider while you read. Taking copious pages of notes or extensive highlighting of chapter material is not the best way to improve comprehension and retention because they don't actively and critically engage you with the material. Instead, consider using active reading strategies which include: focus on the first sentence of each paragraph, which typically represents the main idea; finish reading a section before writing in your own words a brief summary of what you just read; make connections between the material and your own work/life experiences; draft questions you would ask if you were giving a test on the chapter; and limit the number of pages you read and summarize in a single sitting (e.g., 5-10 pages a day over five days rather than 50 pages at once).

Strategies you might consider after you read. Return to the chapter later to help consolidate and reinforce the key concepts from the chapter. Some active strategies include: draw a unique (i.e., different design for each chapter) visual map that synthesizes the critical concepts covered in the chapter;³ and return to the chapter at a later time to focus on the key concepts rather than re-reading.

Consider applying some of these additional overall strategies.

Engage, separately or with others, with a manageable and appropriate subset of the supplemental materials in the companion guide. If you are doing this by yourself, pick one prelection, connection, and reflection question/activity at the end of the chapter and create a 2-3 bulleted response outline (on paper or in your mind). State your responses out loud to confirm that what you are thinking about in your head is clear and understandable; speaking your thoughts out loud supports the development of complex ideas and increases mental connections. If you are doing this with others, give everyone the opportunity to provide a first response, and have others build on ("piggyback") what the previous person(s) shared. This will support active learning and help you get more out of, and better remember, the materials covered in each chapter.

If you are facilitating a workplace or academic reading group, consider developing a "team charter." A team charter provides consensus and clarification on the goals of the reading group (e.g., deep understanding of material to apply in the workplace), timeline for the read (e.g., weekly 90 minute meetings to discuss each chapter), expectations of group members (e.g., read chapter and prepared responses to assigned supplemental materials from the companion guide; rotating roles as facilitator), metrics to measure the team process (e.g., attendance and active

² There are many resources on how to read materials effectively, including <https://learningcenter.unc.edu/tips-and-tools/reading-textbooks-effectively/>

³ For an interesting overview of the history of visual mapping, see <https://www.mind-mapping.org/blog/roots-of-visual-mapping/>

participation), and performance deviations triggering team problem solving (e.g., less than 90% attendance and active participation two meetings in a row).

Start your own book reading group. The group creates an explicit public commitment that will help ensure your goal of reading the book while building relationships with others and increasing your understanding through the perspectives of other readers. Each conversation further reinforces your consolidation of the material and helps you remember it well after the book reading group has ended (or moved on to the next book or article on LHE!).

Overall, applying active strategies before, during, and after reading material will provide a great return on the commitment you have made to read this book.

Chapter 1

The Case for Higher Education

Learning Goals

- Understand that institutions of higher education are facing challenges now and in the future
- Appreciate Lean Higher Education (LHE) as a proven approach for institution-wide change
- Define LHE

Preflection

1. Review the latest issue of *The Chronicle of Higher Education*, *Insider Higher Ed*, etc. Find an article or editorial that argues for the need for change in some aspect of higher education. What is the change that universities⁴ are expected to make, and what are the possible consequences for schools that fail to make these changes?
2. Think of a time you were frustrated by a process or service outside of work (e.g., a retail shopping experience, a medical visit, home/appliance repair, online product purchase). What was it about the process or service that frustrated you? For example, did you have to wait longer than you expected, were there too many steps or forms, or were mistakes made that had to be corrected?
3. Consider the political, economic, social, and technological environments in which your university operates. What do you see as your institution's biggest challenges?

Connection

1. What reaction did you have to the three scenarios at the beginning of the chapter? Choose one of the scenarios, and sketch a flow chart for the process.
2. Describe a process you've encountered that didn't meet your expectations. What do you think was getting in the way of a great process?
3. Looking at the external challenges disrupting higher education on pages 9-11, which are the top three you think your university is facing? What do you know about how your institution intends to confront those challenges?
4. Refer to the proposed definition of LHE found on Page 16. What are the major components included in this definition? Why is each of these important to improving the future of higher education? If you had a chance to visit with the author, what questions would you have about the definition?
5. Review the key features of LHE in Table 1.1. Explain the benefits of each one to an imaginary colleague who isn't familiar with LHE.

A Working Definition of Lean Higher Education (LHE)

Lean Higher Education (LHE) is a problem-solving framework used to increase the value and performance of university processes. Grounded in the principles of continuous improvement and respect for people, the successful application of LHE will meet the expectations of those served by the processes, engage and develop the employees who deliver the processes, and enhance the efficiency and effectiveness of the university.

⁴ To make the writing less cumbersome throughout this companion guide, "university" refers to both colleges and universities.

6. Think about change efforts that have taken place, or are now underway, at your university. Do those efforts include all of the key features of LHE (see Table 1.1)? How might the absence of one or more key features potentially limit the effectiveness of the change efforts?
7. What letter grades (A+ through F) would you assign to your institution/workplace on the two core principles of LHE: Continuous Improvement and Respect for People? What are some of your experiences that led you to assign these grades? How might improvements made by your institution/workplace to raise these grades benefit those served, the employees, and the institution?

Table 1.1 Key Features of Lean Higher Education (LHE)

- LHE is a comprehensive approach to institutional change and improvement that transforms the work experiences of all employees
- LHE respects and balances the needs of the institution with those of its employees
- LHE offers a practical framework with supporting tools that support relentless continuous improvement
- LHE favors implementing solutions quickly
- The successful implementation of LHE is supported by research

Reflection

1. Think of a critical process or activity that is part of your higher education job. Does performing this process or completing this activity require the involvement of employees from other areas? Who is the beneficiary of that process or activity – students, faculty, staff, people outside your university, or? Is the process or activity completed as well as it could be, or is there room for improvement – and are you empowered to make that improvement?
2. What are you hoping to learn more about, as you progress through the book?

Chapter 2

Lean Higher Education in Practice: An Overview and Case Study

Learning Goals

- Recognize the Rapid Improvement Event (RIE) as one of the primary applications of the LHE problem-solving framework for implementing change and improvement
- Understand the common steps in a RIE
- Experience an RIE through a detailed case study

Preflection

1. Mission statements typically conform to the following framework: what you do, for whom, and why. Locate and read the mission statement of your university. Consider how (or whether) your institution’s mission statement, either explicitly or implicitly, addresses these key aspects of mission.
2. What options are available to students at your university who need professional help with mental health challenges that are negatively affecting their academic, social, and personal success? Are they adequate?
3. Think about a time when you made a change in the way you do your work. This might have been initiated by feedback from an error or mistake, constructive professional development during a formal performance review, a reorganization of duties and responsibilities, or self-insight into how you improve your work. What steps did you take to plan and implement the change? What were the results, and were they as impactful as you had hoped?

Connection

1. Who does the university for whom you work serve?⁵ Can you describe one or more important processes or activities that falls short of the mark of meeting the expectations of those who are served by your institution? If your institution fails to deliver the value expected by this beneficiary you serve, what are the potential consequences for these beneficiaries, employees of your institution, and the success of your institution?
2. How are each of the RIE steps in sections 2.2.1 through 2.2.12 followed in the Counseling Center case study important to the success of the RIE? How do these steps support the core principles of LHE (i.e., Continuous Improvement and Respect for People) and the general steps in the application of LHE (Table 2.4)?
3. Review the list of university processes on page 29. Make a list of processes for which you are responsible. From this list, select the one that causes you the most frustration.
4. For the process you identified above, draw a flow chart of how things are operating now (a current state map; see Figure 2.1 as a general guide).

Table 2.4 General Steps in the Application of Lean Higher Education

- Define the value of the process from the perspective of the beneficiaries of the process
- Identify the flow of the process, from both the beneficiary and provider perspectives, to determine which steps and activities add value
- Eliminate the many types of waste that add no value to the process
- Make the process flow smoothly, with activities or services “pulled” as needed by the beneficiary rather than “pushed” by the provider
- Pursue perfection through a combination of continuous improvement and radical transformation of the process

⁵ If you do not currently work at a university, refer to the university from which you graduated.

Ask for feedback on your flow chart from others who participate in the process, and make updates. What did you learn?

5. Consider what it would be like if this process was working perfectly. What would be the impact of closing the gap between how things are in the current process and how they could be in an improved process in the future?
6. Imagine the beneficial effects of the improved process in the areas of operational delivery, quality, experience/engagement of the beneficiaries, and financial performance. How might you measure/document some of these improvements? That is, what information might you gather from the way the current process works that could be reassessed later as evidence of the impact of the improved process?
7. Based on your review of the current state map for the process you selected, what initial ideas do you have to improve this process?

Reflection

1. Refer back to the “failing” process you noted in the first “Connection” above. How might an RIE be used to improve that failing process? Discuss what you might do at several of the steps to support the success of the RIE.
2. Review the percentage improvements on the key metrics for the chapter’s case study as summarized in Table 2.3. How impactful are these improvements on the beneficiaries of this process, employees who are part of this process, and your institution? If improvements of 20% – 90%⁶ could be achieved on key metrics for each of the processes for which you are responsible, how would key internal and external stakeholders respond?
3. What would be your 60 second “elevator speech” to senior leaders at your university to describe the application of the RIE and its potential benefits for an underperforming process at your university?

⁶ Typical improvements reported in Laraia, A., Moody, P., and Hall, R. 1999. *The Kaizen Blitz: Accelerating Breakthroughs in Productivity and Performance*. New York: John Wiley & Sons. pp. 3-4.

Chapter 3

Evidence Supporting the Successful Application of LHE

Learning Goals

- Affirm the ubiquitous application and success of LHE across institutions of higher education across different systems, countries, and cultures
- Appreciate the variety of approaches in the implementation of LHE and the breadth of benefits attained through LHE
- Consider how different aspects of these applications of LHE might best be configured for implementation at your university based on its unique history, culture, leadership, challenges, etc.

Preflection

1. Visit the website <https://leanhe.org/continental-divisions>, which includes a sample of higher educational institutions that have joined this global LHE organization. Explore the breadth of universities around the world practicing LHE.
2. What are some of the unique “points of pride” that best characterize or define your university? Similarly, what are some of the internal challenges recognized as impeding institutional excellence? How do these align – or not – with LHE’s core principles of Continuous Improvement and Respect for People?

Connection

1. Which of the sixteen exemplar applications of LHE intrigued you the most? Make a list of the elements in those examples that you found most appealing or surprising.
2. What are some of the commonalities across the featured sixteen universities that may have contributed to their successful application of LHE? Specifically, how do the variety of approaches support the key principles of Continuous Improvement and Respect for People?
3. What were some of the challenges/roadblocks/resistance faced by these universities in their pursuit of LHE and how were they overcome (or not)? What lessons might you take away to help you on your LHE journey? Are their particular challenges/ roadblocks/ resistance that you are most likely to experience, and how would you potentially address them?
4. Review the *LHE Benefits All University Constituencies* paragraph in section 3.2.1 on pages 94-95. In what ways do you think implementing LHE at an institution would benefit students? Staff? Faculty?
5. What are your thoughts or reactions to the cautionary notes in section 3.2.2? How might you begin to address these issues with the application of LHE at your institution?
6. How would you respond to a statement by a senior leader at your institution, “We should simply adopt the application of LHE as described in the case study at University XXX?”

It All Began Here in 2001: The First Application of LHE

The University of Central Oklahoma began its Lean University™ journey in 2001. You can learn more about their pioneering work by visiting:

<https://web.archive.org/web/20140414085225/http://www.sacubo.org/docs/bestpractices/2007/UnivofCentralOkla-LeanUniversity.pdf>

Reflection

1. If your university is currently implementing LHE: Which of the sixteen university models or approaches from this chapter are most aligned with the pursuit of LHE at your institution, and how so? If your university is not currently implementing LHE: What are your initial emerging ideas or flashes of inspiration on how LHE might look at your institution?
2. Imagine that a senior leader asked you whether there is evidence to support the successful application of LHE. What would you include in your reply to convey the potential benefit of LHE to your institution while fairly representing the available evidence?
3. Prepare an outline for senior leadership about how you would propose implementing (or expanding) LHE at your university. Where would you propose starting? What elements of your outline would you identify as most critical to success?

Chapter 4

Preparing for the Successful Adoption and Implementation of LHE

Learning Goals

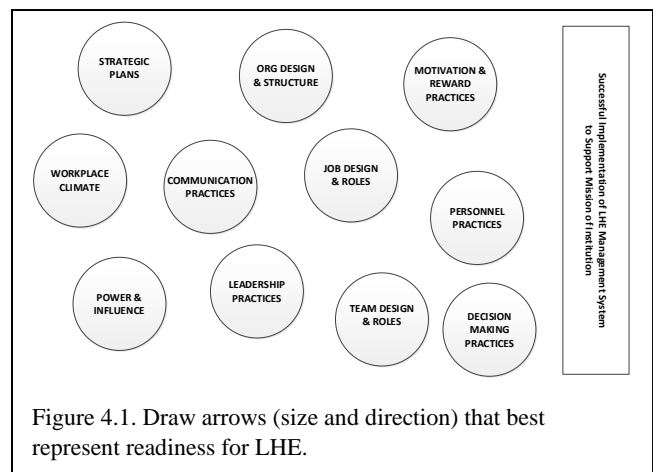
- Assess your university's readiness to pursue LHE
- Create a more hospitable environment for LHE
- Support the successful implementation of LHE

Preflection

1. Think of examples of large or significant changes that have occurred in your professional life (e.g., a reorganization at work, a new boss or project team, a new product or process). How successful were the changes? What do you think were some of the factors that contributed to their success – or lack of success?
2. Suppose you were assigned to a team to help lead a significant change initiative for your university that would bring significant change to how employees do their jobs after being done the same way for many years. What are some of the thoughts you would share with your team members to help the change go smoothly?
3. Think about a time when you developed a new skill such as a sport, hobby, or musical instrument. Make a list of the things you did (or could have done) to get better at the skill.

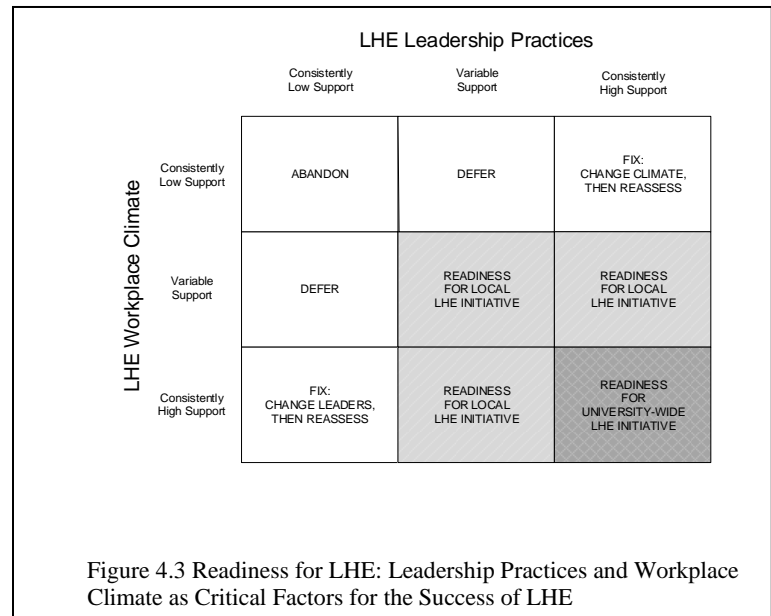
Connection

1. Select one of the institutional practices discussed in Table 4.1 that influence work behaviors and attitudes. Share data, anecdotes, or other information that would provide some insight into whether this institutional practice is aligned to support the successful implementation of LHE at your university. What other information could you gather to determine the extent to which this institutional practice is aligned to support the successful implementation of LHE?
2. Imagine your institution was planning to implement a Lean Management System. Reflect on the descriptions of the Institutional Practices in Table 4.1 and the examples provided in section 4.2. Create a diagram like the one in Figure 4.1 for your institution, drawing in the arrows (size and direction) that best represents its readiness for LHE.
3. Think of a few examples of how changes to Institutional Practices have occurred in the past at your institution. Reflecting on these examples, rate from low to high each of the four “readiness for change” factors found on page 107 to describe the current level of readiness for change. What insights do you have about your institution's readiness for change?
4. What challenges might your university confront by proposing to introduce university-wide or division-wide (e.g., Division of Student Affairs) change where readiness is lacking or can't be demonstrated? If asked, what potential unintended outcomes would you raise with the leader of



this change initiative? And what countermeasures might you suggest be initiated to help establish an appropriate level of readiness for change?

5. How do leaders become leaders at your institution? What opportunities for growth and development as a leader are available? How would these leadership practices help or hinder the transition from conventional leadership to LHE leadership, as described in Table 4.3?
6. Based on your current assessment of your institution's workplace climate and leadership practices of the level of support for LHE, where would you place it in Figure 4.3 and why?
7. Assume you have determined a less-than-perfect alignment between the Institutional Practices of workplace climate and leadership practices and the successful implementation of LHE (sections 4.2.1 – 4.2.3). The leader of your institution still wants to proceed with LHE. She asks whether it would be better to invest time and resources improving these two Institutional Practices to support university-wide implementation, or would it be better to move forward quickly with a more localized LHE effort (e.g., one office or division). What advice would you provide and why?
8. Organizational design and structure (pp. 121-124) can impact the effectiveness of LHE implementation. What organizational design and structure would you propose for your institution to help support the successful implementation of LHE? Why do you feel your proposed design and structure would be best?
9. Colleagues from a neighboring university contact you for advice. They report a current lack of broad support for university-wide LHE, and at best tepid support from their divisional VP. In light of this assessment, they have decided to commit to a grass roots effort to bring LHE principles and practices to their own work unit. They want your advice about what they can do to get started on their LHE journey. What advice would you share and why? Would your advice differ if they indicated that their long-term goal was to eventually extend LHE more broadly across the institution? Why or why not?
10. Identify what you think are the three most important recommendations from Table 4.5 for successful implementation of LHE at your institution. Explain what influenced your choices.
11. On page 137, the author says, "Be prepared for challenges and failures along the way; the implementation of LHE will itself be a process of continuous improvement..." How would this statement factor into a hypothetical situation where your supervisor assigned you to lead a Rapid Improvement Event where, at the end of the RIE, you had to tell your supervisor that the event did not go as planned and the results weren't what were expected?



Reflection

1. Identify one key concept or idea you learned from reading this chapter that you feel will be most helpful should you choose begin your LHE journey. Why did you choose this particular

- concept or idea? In what ways will it be influential in how you do your job and/or view the world?
2. What framework or model have you used (implicitly or explicitly) when trying to implement changes at your university to help improve effectiveness? Has reading this chapter influenced your approach going forward?

Chapter 5

Preparing for the Rapid Improvement Event

Learning Goals

- Appreciate the wide variation in approaches to Rapid Improvement Event (RIE) implementation
- Understand the fundamental steps of preparing for a successful RIE
- Identify helpful tools to support each step of a RIE

Preflection

1. What steps, if any, do you or your area/office take to prepare for an upcoming important project or initiative? Is there a common, shared set of steps that is used consistently? Do you feel they will adequately prepare you to successfully complete the project or initiative?
2. If you are unfamiliar with RIEs, visit an online site that provides an overview of the application of RIE in higher education (see Appendix A of the book, visit training resources at one of the sixteen universities included in Chapter 3, or visit <https://www.leanhighereducation.com/>).
3. Think of a process at work in which you are involved that is not delivering the value expected by the beneficiaries it serves (e.g., no delays, no errors, high quality, etc.).⁷ Take a few minutes to recall some details of the situation. Reflect on the basic facts of the situation, your role in the process or problem, what you are trying to accomplish, and the challenges you are facing.

Familiarize Yourself with the RIE: Two Examples

If you only have 5 minutes, visit this “workplacelean” overview by Des Moines Area Community College: <https://youtu.be/aPNMkNfMGtU>

or

If you can spare 90 minutes, visit this webinar “Holding Effective Kaizen Events” by The Karen Martin Group: <https://player.vimeo.com/video/104680961>

Connection

1. Reflect on the similarities and differences in the RIE models presented in Table 5.1. What conclusions can you draw from the side-by-side comparisons of this sample of RIE models?
2. Section 5.2 emphasizes that LHE is more than RIEs. Why is this important to note? Describe how one of the other applications of LHE might be of interest/value to your university.
3. Go back to the “Helpful Tools” boxes inset in the planning step sections of this chapter. Select one tool from each box with which you are unfamiliar and do an internet search to learn more.
4. Imagine a senior leader at your university wants you to start an RIE immediately because of her frustration with a poorly functioning process for which she is responsible. Outline some key points you would share with her to justify the importance of careful preparation before conducting an RIE.

⁷ Using a work process at your university that is personally relevant to you is preferred. If this is not possible, consider using one of the hypothetical scenarios described in Chapter 1 of the book: Approval of a new or modified course, installing a door in a faculty research laboratory, or thank you notes to donors (see Section 1.1, pp. 2-6).

5. How can the recommendations in this chapter help you and your university prepare for a RIE?

How can these recommendations be extended to other campus initiatives that are not RIEs? For example, how are campus initiatives currently prioritized in terms of which initiatives will be done and/or in which order? Could the recommended steps and tools in this chapter help improve your institution’s current practices for prioritizing initiatives?

6. At several steps in the planning process, it is recommended to “observe,” “walk,” or “visit” the process that will be the focus of the RIE. How will RIE team members benefit from information gained in this way?

Eight Steps in Preparing for the Rapid Improvement Event	
<i>Step(Chapter Section)</i>	<i>Major Activities</i>
Identify the Process Targeted for Improvement (5.4)	Identify processes as potential candidates for improvement; Select the process to be targeted for improvement
Organize the RIE Team (5.5)	RIE team members; RIE team member roles; Team charter
Train the RIE Team (5.6)	Training model; Training content
Scope the RIE Process (5.7)	Scoping event
Identify What the Beneficiary of the Process Values and Expects (5.8)	Identify beneficiaries; Identify what beneficiaries value and expect; Techniques to gather information from beneficiaries; Lean tools to determine what beneficiaries value and expect
Establish Metric for Documenting RIE Improvements (5.9)	Quality metrics; Operational deliver metrics; Employee experience and engagement metrics; Financial and business performance metrics
Gather Information on the Process Before Conducting the RIE (5.10)	Visit the process in action; Scour archival data and reports; Collect information on metrics selected to document benefits realized by RIE
Logistical Preparation for the RIE (5.11)	RIE room, furnishings, and technology; Pre-RIE training and meetings; Pre-RIE communications; RIE materials

Reflection

1. An RIE team typically includes members highly familiar with the process targeted for improvement, a team facilitator with LHE knowledge and experience leading a RIE, a sponsor with the influence/authority to resolve unforeseen challenges to the work of the team, and individuals with specialized expertise who can be drawn on by the team on an ad hoc basis. Contrast this with examples currently in place at your institution to address problems with processes. Are there benefits from the extensive preparation for the RIE collaborative problem-solving framework compared to your university’s current/traditional approach?
2. Reflect on the consolidated model for RIE presented in Table 5.2 drawn from the different but overlapping approaches at the seven institutions represented in Table 5.1. Based on your institution’s current culture, readiness for LHE, and supporting structures/resources for preparing, conducting, and implementing RIEs, is one of the approaches presented (as is or with some minor changes) a better fit for implementing RIEs at your university? Why?
3. What do you see as one of the more challenging steps in preparation for RIE in your institution and why? Can you think of any countermeasures you might be able to put in place to help overcome this challenge?

Chapter 6

Conducting, Implementing, and Sustaining the Rapid Improvement Event

Learning Goals

- Recognize the steps, key activities, and tools that are commonly used when conducting, implementing, and sustaining a Rapid Improvement Event (RIE)
- Apply best practices when creating visual maps
- Identify waste and impediments to flow in the “Current State” process
- Identify solutions to remove waste and impediments to flow in the “Future State” process

Preflection

1. How does your university improve processes? Describe how it is done (e.g., a standard approach or different each time; conducted by management or involving employees who are part of the process; quickly completed and implemented or a more deliberative longer term activity, etc.). What are the pros and cons of the current approach used at your institution, and where do you see room for improvement?
2. Watch the video link <https://www.youtube.com/watch?v=wz28yMcDvVM> on the application of Lean principles and practices to improve community food distribution following the devastation of Hurricane Sandy in 2013. What stood out to you as most important in improving the process, engaging the minds of those in the process, and providing much needed food and hope to victims of Hurricane Sandy?
3. Recall the process problem or performance issue you identified in Preflection #3 in the preceding Chapter 5 of this companion guide. Identify, if any, your steps in this process. If there are other university colleagues involved in delivering the process, identify their steps. Finally, identify the steps by the beneficiary of the process (e.g., a student, faculty member, alumni, etc.). What problems do you foresee in understanding and improving a process when you may not be familiar with all steps in the process?

Connection

1. Review the summary of activities for a 5-day RIE in Table 6.1. What is your reaction to the idea of spending an entire week immersed in conducting and implementing an RIE? What points would you prepare (i.e., countermeasures) to share with leaders in anticipation of their concerns or resistance to this commitment of time?
2. Why is it important for all RIE team members to participate in creating the visual map of the “current state” process? Using the process identified in Preflection #3 in the preceding Chapter 5 of this companion guide that is not delivering the value expected, how would you engage all RIE team members in the visual mapping process?
3. Continuing with the same process identified in Preflection #3 from Chapter 5 of this companion guide, mentally walk through the complete process from beginning to end to create a preliminary visual map of the process using the guidance provided in Section 6.14. What insights did you glean from this initial effort of “learning to see” the process? What additional information would be helpful to you to best understand the process? What types of metrics would be helpful to document how the process is performing?
4. Use the list of wastes and impediments to flow provided in section 6.2.1 and the ideas represented in Table 6.3 to identify examples of each of the wastes in your office.

5. Refer back to the important work process you thought about in Preflection #3. Identify up to five types of waste in that process. Who is directly impacted by each of the wastes: the provider of the process, the beneficiary of the process, or both?
6. Root cause analysis is a truly powerful tool to make sure you understand the underlying cause of a problem so that you can determine the most appropriate solution. Think of a problem you are currently experiencing at work. Use the “Five Whys” technique, alone or with others, to determine what its root cause might be.
7. Review the example list of Lean best practices in Table 6.5. Select two items from the list. Consider how you would draft a memo to your supervisor or work colleagues describing what these two items are and how you would propose including these in the work done in your area.
8. Imagine you were invited to be part of an RIE Implementation Team to help sustain the changes to the new “Future State” process. What would your top three recommendations to the implementation team be to help sustain the new process?
9. Outline (orally or in writing) how you might use the key concepts from Sections 6.1 – 6.6 to conduct, implement, and sustain an RIE to address the problem or issue you identified in Preflection #3 in the preceding Chapter 5 of this companion guide.

Table 6.5 Example List of Lean Best Practices
(*Japanese term in parentheses*)

<p>5S organized workplace to establish a foundation for a reliable process</p> <p>Total Productive Maintenance to self-maintain the safety and performance of equipment or machine</p> <p>Standard Work/Tasks according to best practices (time, steps, materials, quality, etc.)</p> <p>Work Cells arrange resources to improve process flow and reduce waste</p> <p>Just-in-Time to supply what is needed in the right amount and at the right time</p> <p>Single/One Piece Flow is where service is provided one person at a time through completion</p> <p>Pull System to produce only when needed on request (<i>Kanban</i>)</p> <p>Leveling work across employees (<i>Heijunka</i>)</p> <p>Flexible staffing to match demand requirements (<i>Shojinka</i>)</p> <p>Set-Up Time Reduction to improve turnaround when switching tasks</p> <p>Mistake-Proofing to keep a known error from recurring (<i>Poke Yoke</i>)</p> <p>Signal to stop a process when a problem has occurred (<i>Andon</i>)</p> <p>Autonomation where machine stops and sends visual alert when problem detected (<i>Jidoka</i>)</p> <p>Visual Management/Indicator to communicate and inform (<i>Kanban</i>)</p>
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Reflection

1. Despite the name, a 3-5 day RIE may be less “rapid” than current problem solving approaches used at universities (e.g., a top down decision by the administrator who owns the process). What benefits might accrue from the application of RIE’s more structured and deliberate set of steps to problem solving?
2. Describe some examples of how you might apply these LHE principles and practices (and helpful tools) to your own job or to the work of your office team.
3. How might these LHE principles and practices (and helpful tools) be used for improving a process outside your workplace? For example, how might you use the RIE problem solving approach in your volunteer community service, clubs and organizations, and personal life?

Chapter 7

Lean Academic Processes

Learning Goals

- Recognize that LHE can be expanded to the core academic processes of teaching and curriculum, research, and service/outreach
- Identify waste and impediments to flow in academic processes
- Understand LHE application to teaching and curriculum

Preflection

1. This chapter starts with two provocative questions: “Of the 40 or so professors you had as an undergraduate, how many were really good?” and “Looking back on your undergraduate studies, which professors had a real impact on you?” Think about your own answers to these two questions before you start reading the chapter to compare your answers with those referenced by the author.
2. Recall some of your memories of the best instructors you had as part of your university education. What did they do to make your courses a positive experience?
3. Medical professionals, engineers, airline pilots, and many other professions have adopted standard work processes, checklists, and other best practices to be highly effective. How might this approach be extended to faculty teaching, research, and service/outreach – or is this approach somehow incompatible with academic processes?

Connection

1. Review the examples of waste for academic processes directly associated with teaching (Table 7.1). Which of these do you recognize from your time in the classroom? Take a moment to brainstorm possible solutions.
2. Share your thoughts on how waste and impediments to flow related to course design, course delivery, course assessment, and course support might negatively affect student learning outcomes.
3. Section 7.1.2 lists many impediments to flow in academic processes. Imagine a new tuition strategy lets students pay a set price for a fixed time (subscription) where students can take as many courses as they want to during that time. What flow issues might this improve? What flow issues might get worse?
4. Section 7.3.2 and Table 7.4 introduce the concept of a continuous flow university. Many academic and academic support processes would need to be reinvented. If

Table 7.4 Comparison of Traditional versus Continuous Flow Universities

<i>Traditional University</i>	<i>Continuous Flow University</i>
<i>University-Focused:</i> Designed from the perspective of administration and faculty (i.e., a non-competitive seller’s market where students compete to attend universities)	<i>Student-Focused:</i> Designed from the multiple perspectives of students (i.e., a competitive buyer’s market where universities compete to attract students)
<i>Pushed Educational Services:</i> Batch processing (e.g., courses start and end on fixed dates)	<i>Pulled Educational Services:</i> Continuous flow (e.g., start and finish courses at own pace)
<i>Waste of Waiting:</i> Waiting for admission decision, course registration, course to start, next class meeting to occur, appointments for support services, etc.	<i>On Demand:</i> Immediate admission decision, course registration, course start, progression at student-determined pace, appointments for support services, etc.

value is defined by the beneficiary, what aspects of this reimagined university do you think students would value? What aspects might not be valued by students?

5. Choose one of the examples of the application of LHE to the academic processes of teaching and learning in section 7.4. What is something that stood out to you? What makes this interesting or important? What might you do with this insight or knowledge?
6. Review the recommendations in Section 7.5.1 for initiating LHE efforts to improve the academic processes of teaching and curriculum. Focusing on the criteria of anticipated benefit and ease of implementation, which 1-2 recommendations would you rank the highest – and why?
7. Outline (orally or in writing) how you might apply LHE principles and practices to improve student learning outcomes and course evaluations of a large enrollment introductory course (e.g., Introduction to Psychology) that is taught by many different instructors.
8. Suppose you were asked to advocate for the application of LHE to core academic processes at your HE institution. What points would you make in support of this initiative at your university? Include in your advocacy some barriers your institution might face and what countermeasures it might take to overcome them.

Reflection

1. The application of LHE to academic processes has been limited but represents a new frontier of opportunity. If you were trying to recruit faculty members on experimenting with LHE principles and practices in their classrooms, what might be some key points you would include in your “elevator pitch” to pique their interest?
2. It has been stated that higher education is in a period of great disruption: cost pressures, greater competition, challenges to the traditional model of academic degrees, competency versus 15 weeks of seat time, etc. What do you see as the most significant “disruptors” facing your HE institution, and how might LHE offer a new framework to help it survive and thrive?

Chapter 8

Making the Case for LHE: Gaining the Support of Senior Leaders

Learning Goals

- Be able to articulate for senior university leaders the potential benefits from the successful implementation of LHE
- Recognize the critical institutional commitment needed from senior leaders to implement and sustain LHE

Preflection

1. Imagine you are a member of the senior leadership team at your university tasked with evaluating a major new initiative that could potentially transform your institution. What types of information would you recommend/require be part of the evaluation process?
2. Suppose you found yourself entering an elevator with the chief academic officer and chief financial officer of your HE institution immediately following your well-received overview of LHE to the president’s cabinet. As the doors close, the CFO turns to you and asks, “Why would I have any interest in LHE if it doesn’t reduce the number of full-time employees – the biggest expense line in our budget?” The CAO looks at you, also interested in your answer. What would you share in your brief “elevator speech” before the doors open to gain their interest in LHE? (Suggestion: do not to use specialized LHE terminology or their eyes may glaze over.)

Connection

1. Think about a process at your university that needs to be improved. Brainstorm some financial, quality, operational delivery, and/or staff engagement benefits that might be achieved from improving the process. Create a “Benefit Realization Spreadsheet” (for an example, see Table 8.1) to document your ideas. How might the presentation format of this spreadsheet help senior leaders appreciate the benefits/outcomes possible through the implementation of LHE?
2. While cost reduction is the goal of LHE, LHE is not a cost reduction program. How would you explain this paradox to the leadership at your HE institution?
3. Our working definition of LHE states, in part, that “... *the successful application of LHE will meet the expectations of those served by the processes, engage and develop the employees who deliver the processes, and enhance the efficiency and effectiveness of the university.*” Outline (orally or in writing) for senior leaders the potential benefits of LHE in each of these areas.

Table 8.1 Template			
Benefit Realization Spreadsheet: (insert process name here)			
Benefit	Expected Benefit #1	Expected Benefit #2	Expected Benefit #3
<i>Measurable Benefit</i>			
<i>Description of Measure</i>			
<i>Baseline Calculation</i>			
<i>Post-Improvement Calculation</i>			
<i>Benefits Realized</i>			

4. Review Section 8.2.2 that discusses how to generate senior leadership interest in LHE. Apply this information to create an outline (oral or written) of steps you might take, and the timeline to accomplish them, to establish senior leadership interest and support for LHE.
5. Consider the potential challenges to securing senior leadership's commitment to LHE discussed in Section 8.2.4. Which are most likely to occur at your institution? What countermeasures do you think might be most effective in reducing or eliminating these challenges?
6. Alone or with colleagues, identify what you expect will be the most significant challenges to securing senior leadership, middle management, and employee commitment to LHE at your university. Can you also suggest countermeasures you might take to reduce or eliminate these challenges?
7. Identifying waste is critical to LHE, and the author proposes that unique forms of leadership waste may also detract from the value and performance of the university processes they oversee. Reflect on the four leadership wastes described in Section 8.3.1 and provide examples of these wastes in your work, in the work of your colleagues, and in the work of your supervisor.

Leadership Wastes

Waste of Focus. Critical objectives are unclear or are lost in translation as they filter down from senior leaders to mid-level leaders through all levels of the university.

Waste of Structure. Leadership-defined structure (e.g., job titles, office names, reporting relationships, role expectations, communication patterns) fail to establish employee behaviors consistent with LHE.

Waste of Discipline. Employee goals and behaviors drift over time or when pressures at the university make it difficult for employees to support critical objectives.

Waste of Ownership. Managers exert inappropriate control over employees, restricting their autonomy and stifling employees' opportunities to identify and resolve problems that affect their performance and goal accomplishments.

Reflection

1. Senior leaders at universities will likely focus on different key performance indicators related to their area of responsibility (e.g., the vice president for admissions will focus on student enrollment and retention, the CFO will focus on revenue generation and cost containment, the provost will focus on the quality and reputation of academic programs and faculty, the vice president for student affairs will focus on the student experience outside the classroom). How can you acknowledge and address these unique KPIs while raising their consensus around higher level measures of success?
2. Lean leadership requires a transformation of the management thinking and practices at an institution. What actions could you take that would support this transition at your university?

Chapter 9

Realizing the Promise of LHE

Learning Goals

- Understand the potential benefits of LHE for your institution
- Understand the challenges to and opportunities for the broader adoption of LHE
- Recognize the needs to advance the scientific understanding and the applied practice of LHE

Preflection

1. One of the pillars of LHE is “continuous improvement.” As you have read in this book or experienced at your HE institution, what are some opportunities for continuous improvement in your work where the application of LHE might be beneficial?
2. Knowing LHE and doing LHE are two different things. What are the biggest questions remaining about what you need to know about LHE and how to do LHE that would help you address the challenges you are facing as you advocate and/or advance LHE at your university? What is the next step you need to take get answers and move toward your vision?

Connection

1. Why is research on both the successes and failures of LHE important? How can LHE practitioners and LHE researchers collaborate to ensure that the field of LHE continues to improve?
2. Review the critical questions listed in 9.1.4 that can help decide whether a university is ready to launch, delay, or defer the introduction of LHE. Which of these questions may be most relevant at your institution? How might you share what you have learned in this book to help others at your institution determine how big these barriers might be and/or whether they could be overcome with well-developed countermeasures?
3. Imagine senior leaders at your HE institution are supportive of the concept of LHE but reticent to implement LHE university-wide as a first step. Outline (orally or in writing) a staged approach to implementation that may be acceptable to leadership that creates a planned path for the broader implementation of LHE in the future.
4. Section 9.2 discussed several strategies for expanding LHE’s impact. Which one do you feel may have the most meaningful impact on the future of LHE? What action might you take to expand LHE’s impact at your university or more broadly in the field of higher education?

Reflection

1. What is your vision for LHE? Imagine twenty years in the future an exemplar university that has implemented successfully the “best of best” LHE problem-solving framework to increase the value and performance of its processes, fully grounded in the principles of continuous improvement and respect for people. Describe that university from the perspectives of those served by the processes, the employees who deliver the processes, and senior leaders of the university.
2. The promise of LHE is a North Star that can guide our LHE efforts. What might you do to move your institution closer to this ideal state?

