



A Public Health Application of 'A3' Lean Management Principles

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Overview of the A3 and strategy deployment

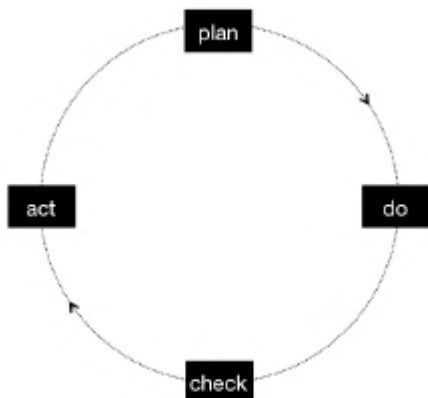


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A large grid of small squares, intended for writing or drawing notes related to the A3 report and strategy deployment.

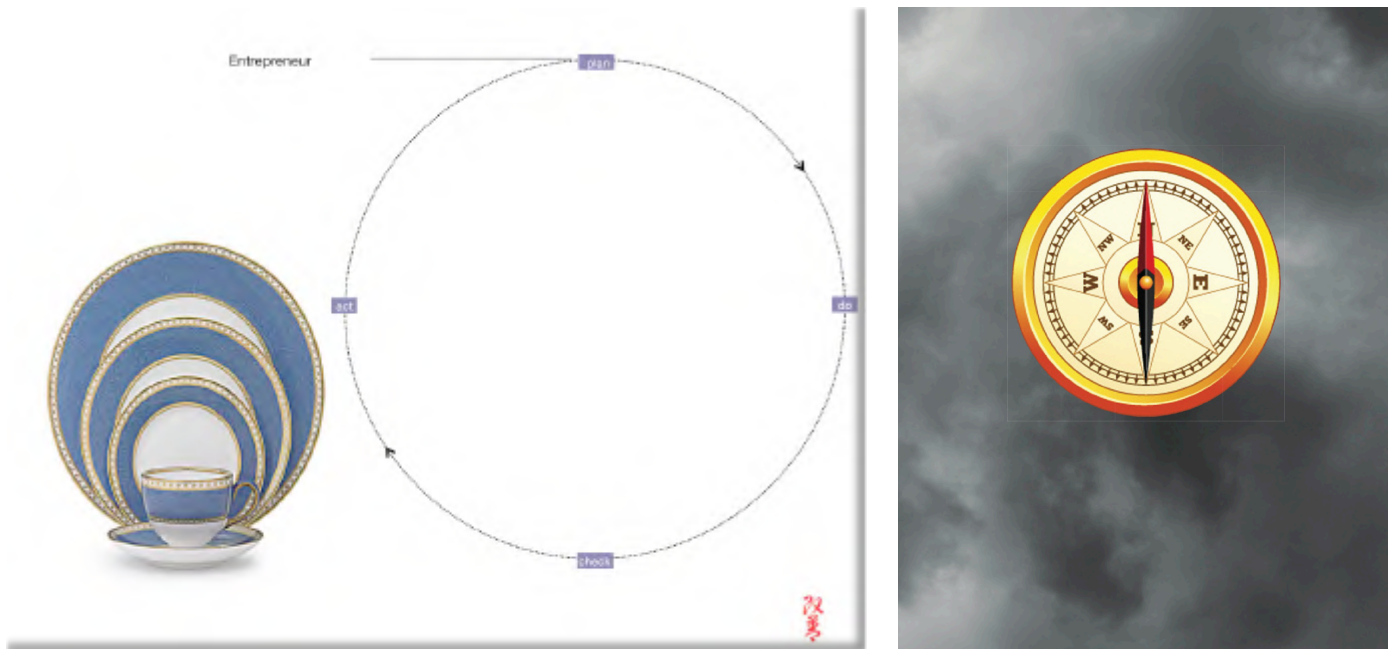
Basic unit of organizational structure



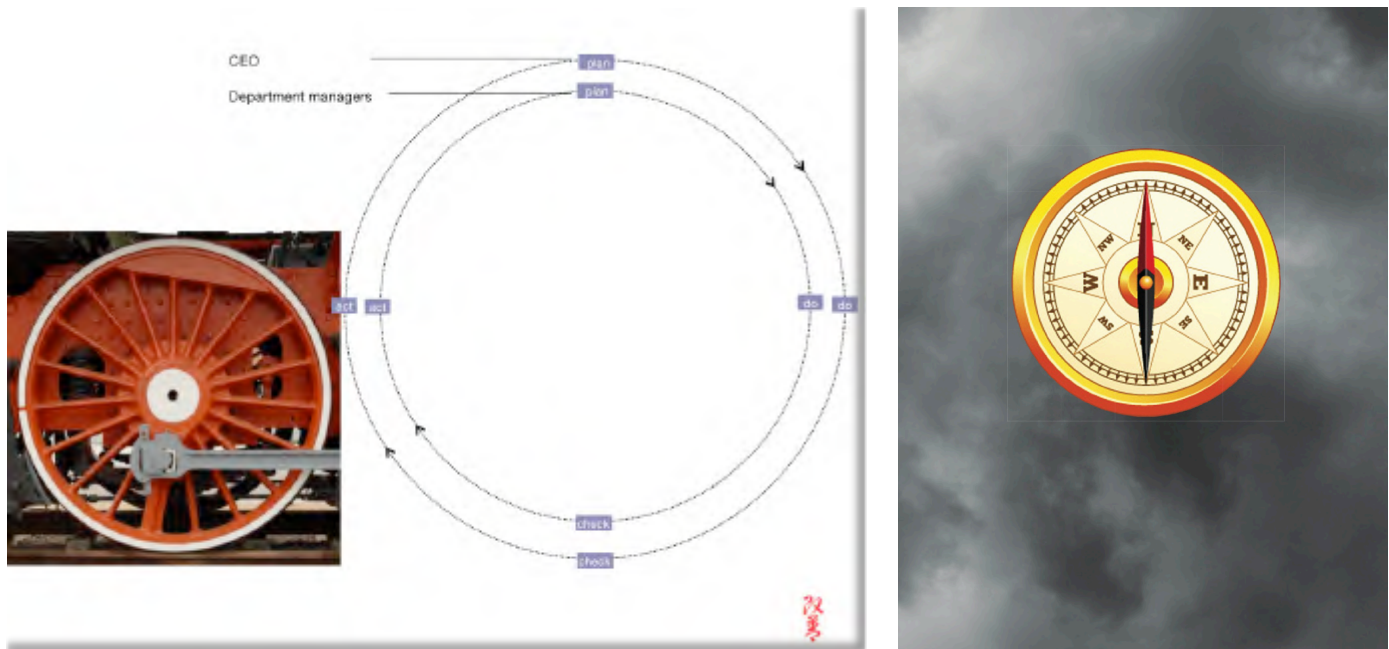
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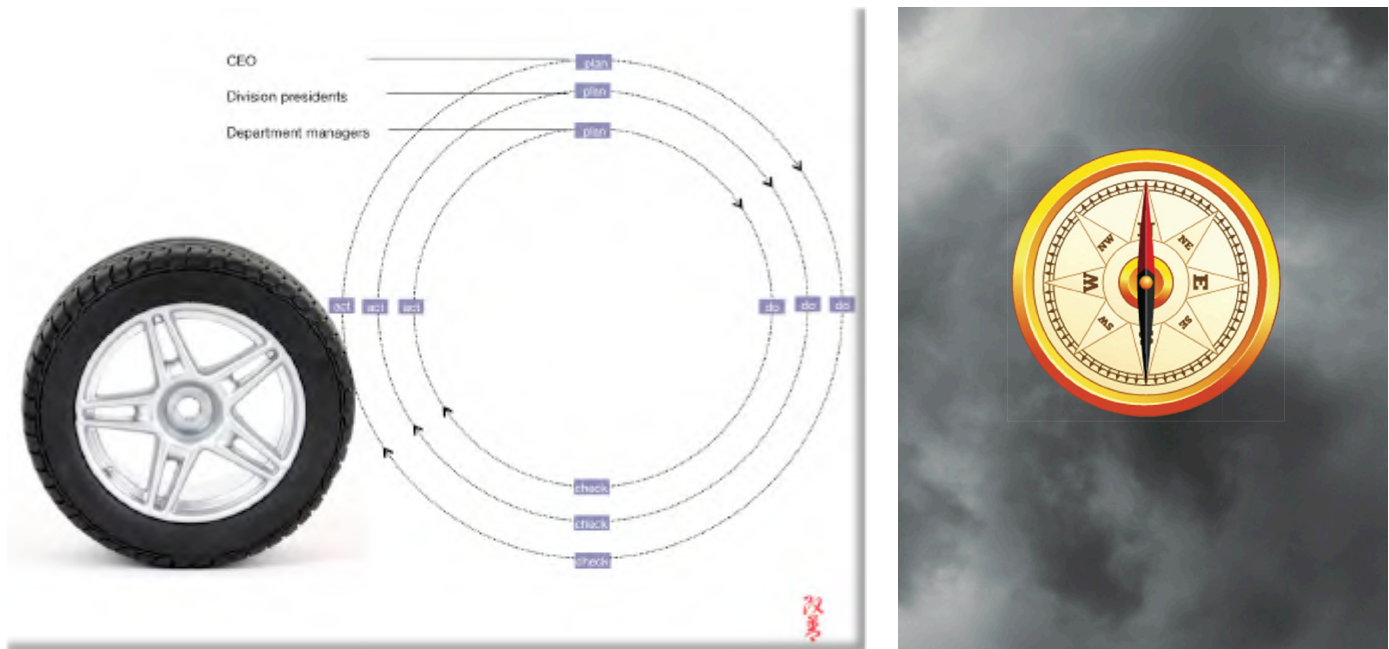
- ◆ So what is A3 thinking?
- ◆ A3 thinking is scientific in the sense of the Deming or Nolan cycles of PDCA/PDSA.
- ◆ More broadly, however, A3s and A3 thinking represent an entirely new approach to organizational structure and control, known in Japan as *hoshin kanri* or lean management.
- ◆ Before we dive into the A3, a little bit of economics and a little bit of history will help.
- ◆ First, the economics. Economists view organizations as information-processing structures. To an economist, organizational structure is not an organization chart. An economist's picture of an organization is more in the nature of computer design.
- ◆ We might say that the *basic* unit of organization structure is the problem-solving or PDCA cycle of a single individual.



- ◆ Now for the history.
- ◆ As chronicled by Adam Smith in *The Wealth of Nations*, around 1720, the entrepreneur invented an information-processing structure known as the *division of labor*. What type of information processing structure was that?
- ◆ We may think of the entrepreneur as an independent problem solver, represented here by a single PDCA cycle.
- ◆ Individuals who worked for the entrepreneur were not expected to solve problems. They were expected to adhere to work standards established by the entrepreneur.
- ◆ We can characterize this management system in terms of *standardize and correct*.

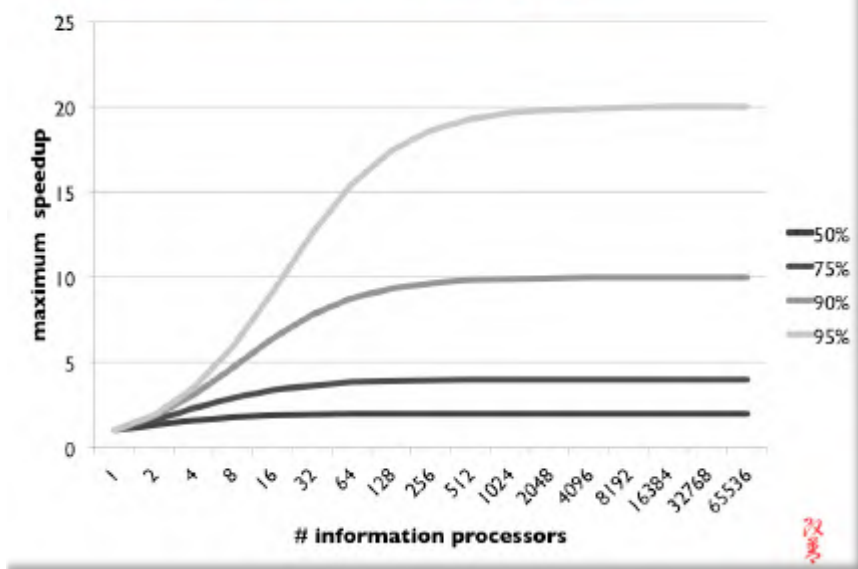


- ◆ For a long time, the entrepreneur was master of the universe. Then, in the mid-19th century, we saw the rise of Big Business and the invention of the corporation and its CEO, supported by a staff of functional managers:
 - Finance
 - Marketing
 - Operations
- ◆ In this picture, the corporation is represented by an information-processing structure of two “nested” PDCA cycles.
- ◆ We can characterize this management system in terms of *command and control*. It was, in fact, based upon the line and staff model of the 19th-century Prussian military establishment.

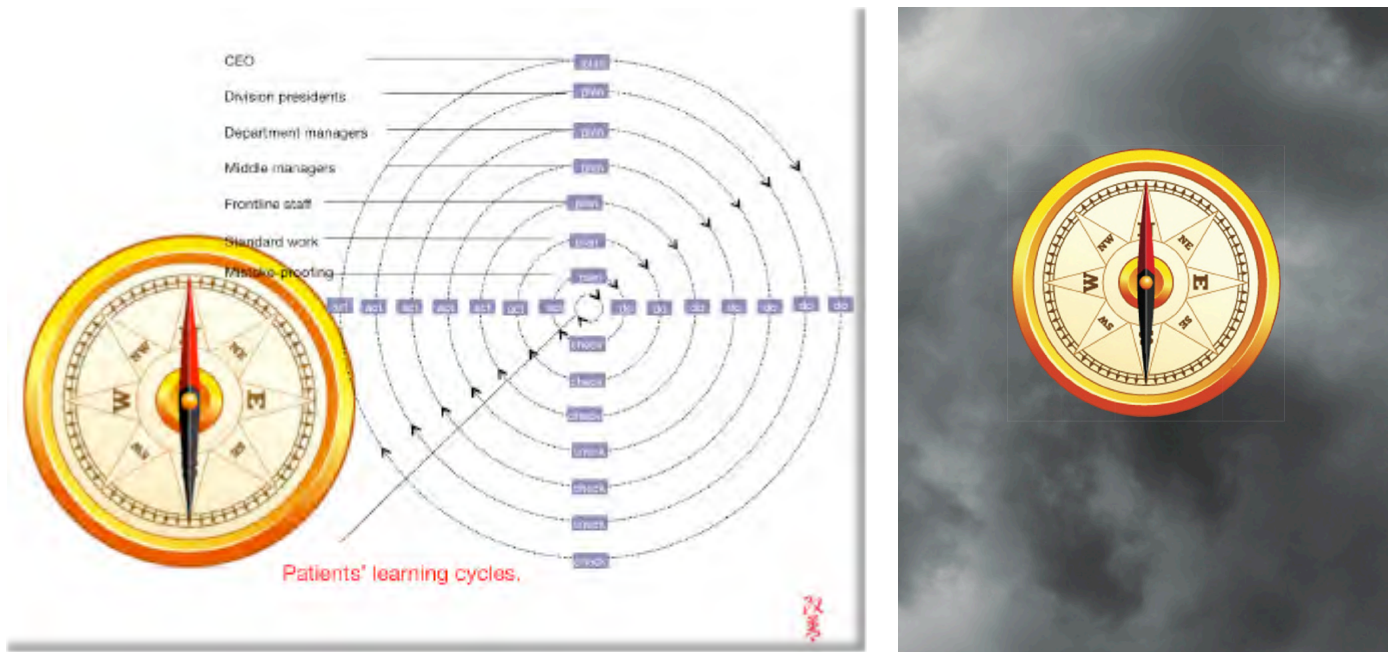


- ◆ The CEO reigned supreme for almost a century. Then in the 1920s, General Motor’s Alfred Sloan invented the modern corporation by decentralizing Big Business into divisions, each with its own CEO or president and its own functional staff. This is the origin of modern healthcare’s organizational structure.
- ◆ Sloan maintained control with:
 - a system of financial targets and internal audits that later became management accounting.
 - a centralized staff of accountants and auditors.
- ◆ The modern corporation is illustrated here as an information processing structure of three “nested” PDCA cycles.
- ◆ We can characterize this management system in terms of *target and audit*.

Parallelization and computing speed



- ◆ So what is really going on with this historical trend toward decentralization, beginning with the entrepreneur and ending with management accounting, financial targets and internal audits?
- ◆ We can draw an analogy to the history of computing. How many of us have acquired a new laptop within the last five or six years?
 - Until 2004, the computer industry relied mainly on an information-processing model that relied on a single CPU or central processing unit. The model looked a lot like our model of the entrepreneur's PDCA cycle.
 - In 2004, at Intel, everything changed, and for good reason...



- ◆ Between 1948 and 1988, Toyota invented a new organizational form by radically decentralizing decision making to the front lines of operations.
- ◆ Strategy deployment is shown as an elaborate system of “nested” experiments, one for every manager in the organization. How did this come about?
- ◆ Control was asserted through strategy deployment, which integrated financial and quality systems, making management accounting obsolete except for external reporting.
- ◆ We can characterize lean management in terms of *empower and diagnose*.
- ◆ *Diagnosis* replaces the *audit* as a form of control because, in a radically decentralized information-processing structure, managers become servant leaders concerned with the long term development of the organization’s human resources.

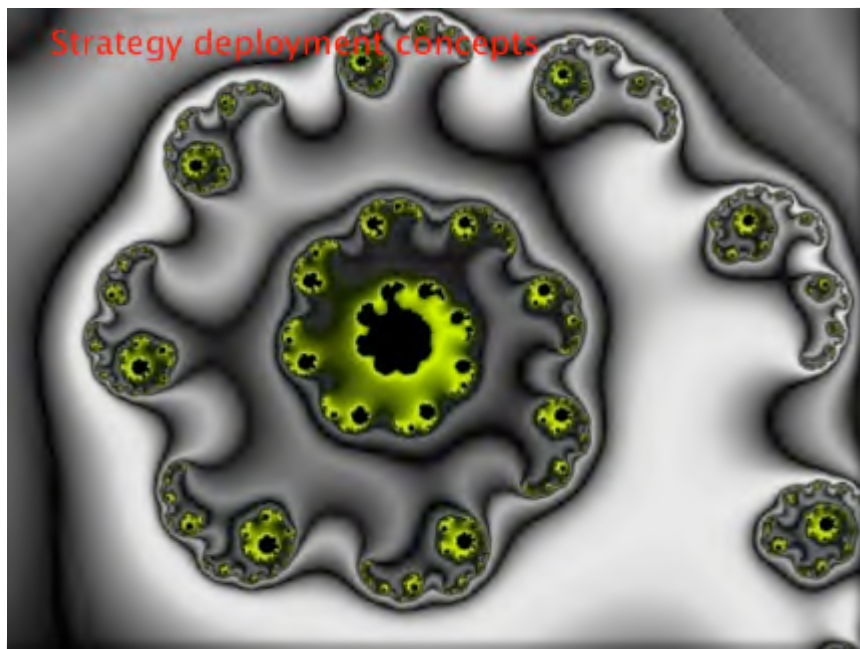


- ◆ Organizations aren't really computers. So, as a practical matter, what is a lean enterprise?
- ◆ We can say that a lean enterprise is a community of scientific problem solvers.
 - Here we see the Renaissance artist Raphael's painting *The School of Athens*, which hangs in the Vatican. At the center of the picture are the Greek philosophers Plato and Aristotle, arguing over the existence of numbers and forms and the reality of this earthly existence.
- ◆ Lean community members practice standard work to improve process flow and quality and to establish controlled conditions for engaging in small, repeatable, documented tests of change.
- ◆ Results of trials—successful or not—are published in an in-house peer-reviewed journal known as the Book of Knowledge.

What is an organization?

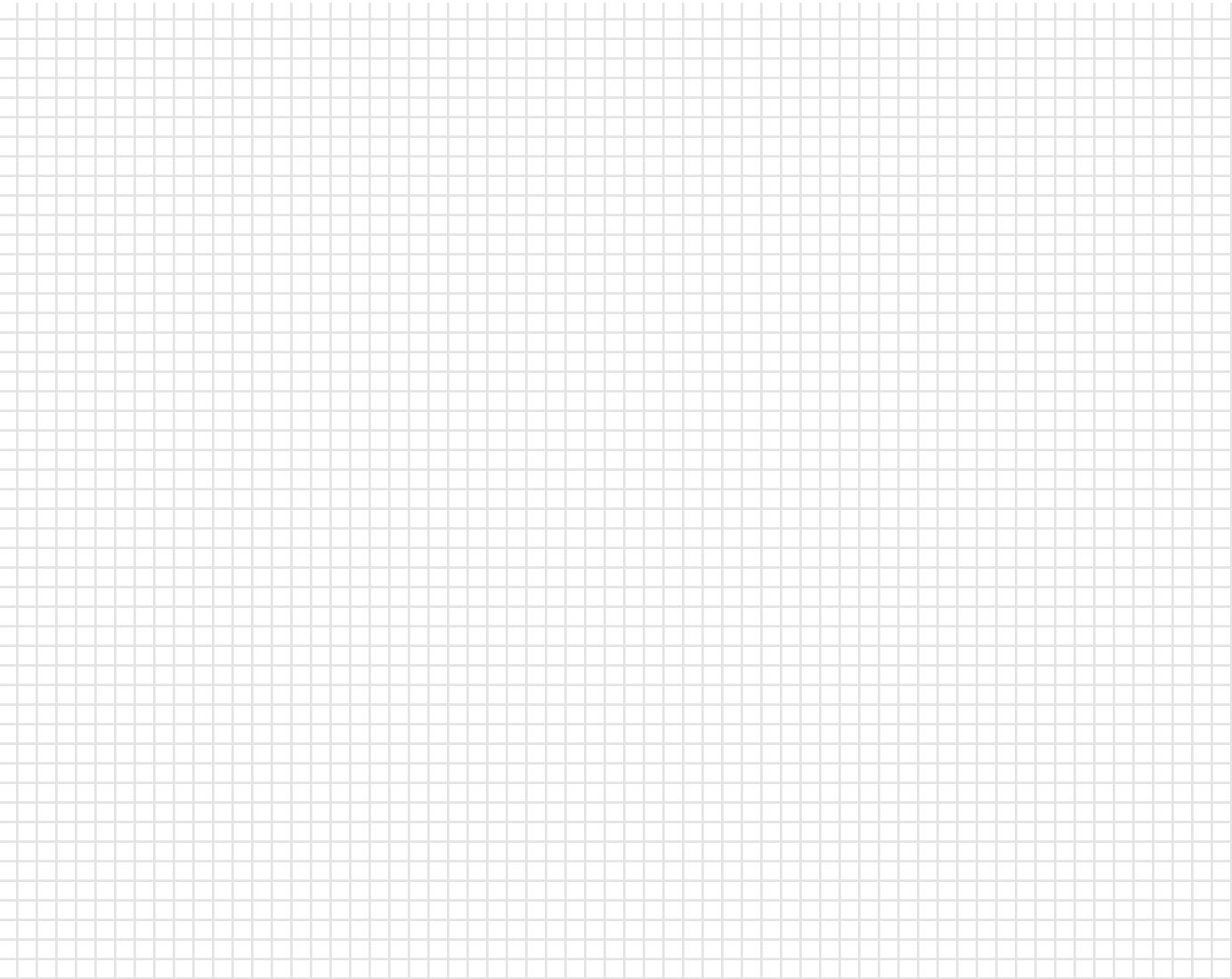
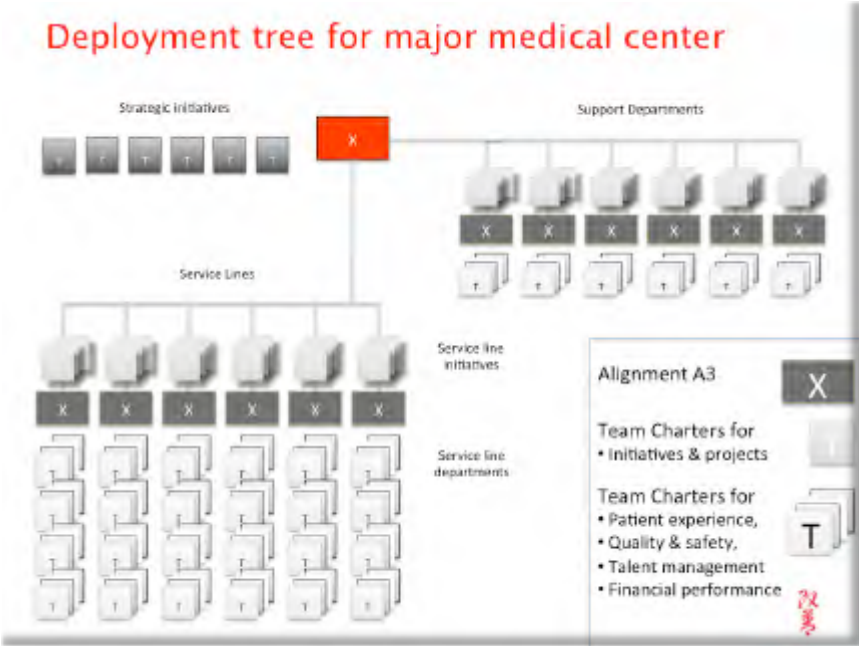


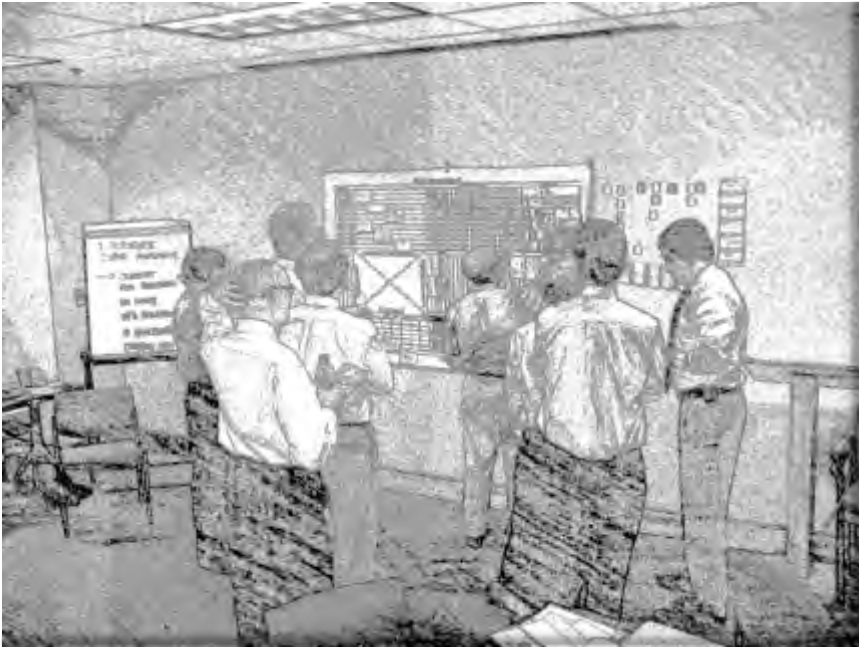
- ◆ Economists teach us that organizations are nothing but contracts, bundles of contracts:
 - Formal contracts of employment and supply.
 - Informal contracts affecting almost every aspect of daily work and cooperation.
- ◆ The basis of any contract is a “meeting of the minds”. With no meeting of the minds, contracts are unenforceable in a court of law. Without a demonstration that there has been a meeting of the minds, contracts are “unconscionable”, which is legalese for “unthinkable”.
- ◆ The internal contracts that govern the modern organization are very often agreements to coordinate thinking and behavior.
- ◆ The A3-T is the preferred method of contracting within a lean enterprise.
- ◆ An A3 is essentially a team charter. “Charter”, of course, is just another word for contract or agreement.
- ◆ In the context of lean enterprise—the community of scientific problem solvers—A3s are contracts to conduct experiments believed to hold promise for the future of the organization.



- ◆ A lean organization is fractal, that is, its structure is the same at the top as well as the bottom and at every level in between. Everyone is engaged in PDCA to find, fix and prevent defects in as close to real time as possible.
- ◆ Using the A3 as the basic building block of PDCA problem-solving cycles, strategy deployment achieves organizational alignment and transparency in the context of radical decentralization by employing four important concepts:
 1. Visual management of strategic change.
 2. Visual project management.
 3. Visual production management:
 - Standard work for leaders as well as clinicians and support staff.
 4. Visual control of standard work:
 - Clear connections.
 - Unbroken flow.
 - Local PDCA.

Deployment tree for major medical center

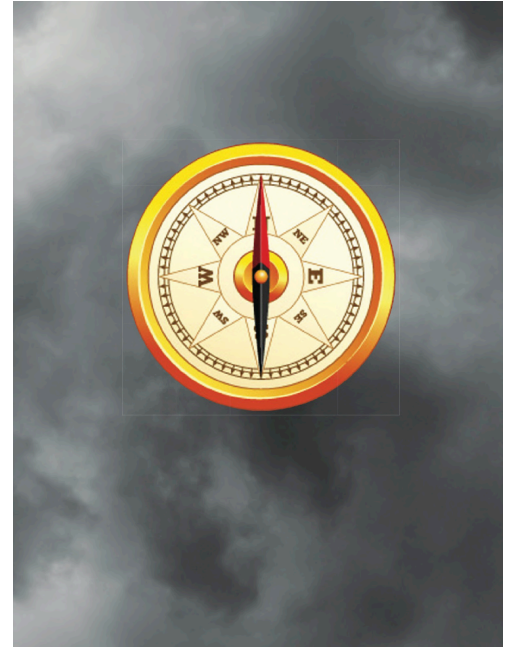




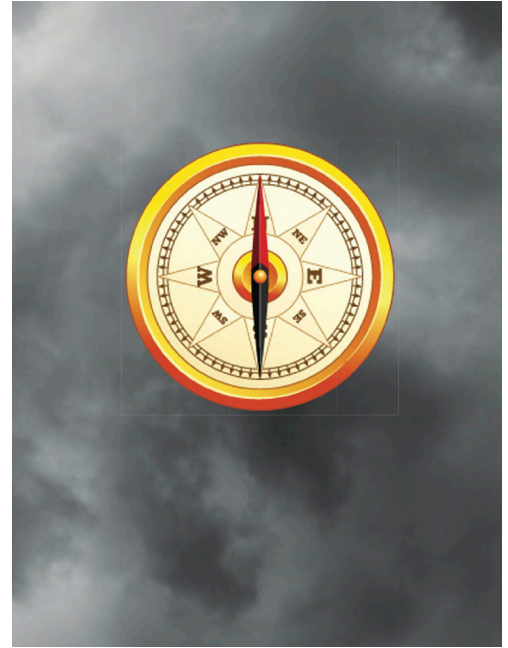
- ◆ Here is the leadership team of a major Midwestern medical center. They are using a “visibility wall” to decide what to focus on, which will determine the A3s they will write later.



- ◆ In this picture, we see a group of strategy-deployment facilitators drafting A3s. They are preparing to support the leaders of their organization in initiating the lean management process known as “catchball”.
- ◆ We use catchball to communicate “what” leaders want managers to do, and to give managers the opportunity to respond with “how” they propose to get the job done.
- ◆ The catchball process centers around the A3-writing process. Each A3 goes through multiple revisions until both the “whats” and “hows” of strategic change management have been clarified and confirmed by all stakeholders.



- ◆ Once all A3s have been deployed, the A3s and their associated run charts are displayed on a visibility wall of their own.
- ◆ In this picture we see a “visibility room” in which all the A3s written for a European natural gas systems company are displayed on three walls.
- ◆ Catchball meetings are held here once a week to review progress on projects and kaizen activity chartered through the lean management process.



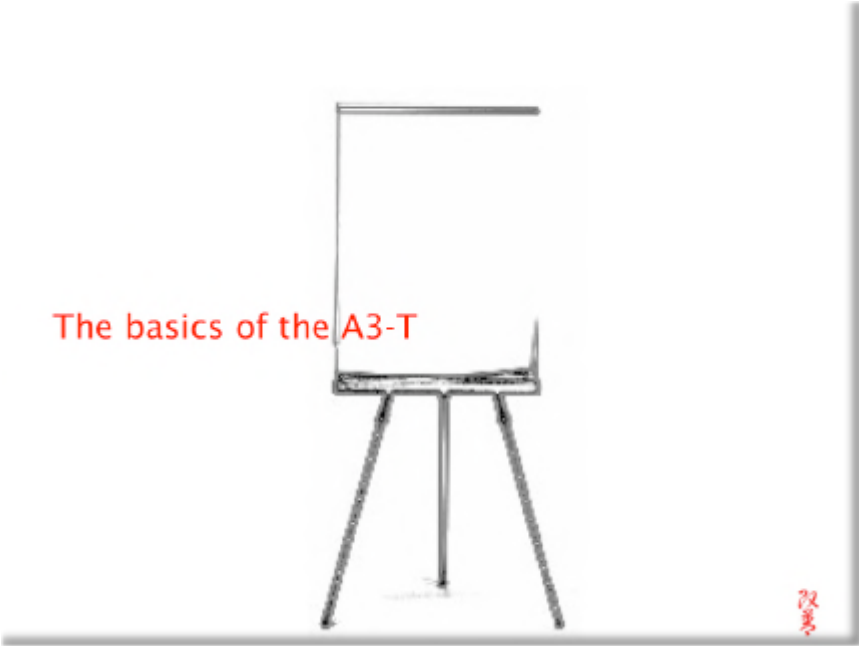
- ◆ The end result of writing A3s is a workforce empowered to solve problems at their source.
- ◆ In this picture we see a group of kaizen promotion office personnel who are solving problems at the front line of manufacturing in Italy.



A3 EXERCISE: San Vicente County Medical Center case study

Instructions

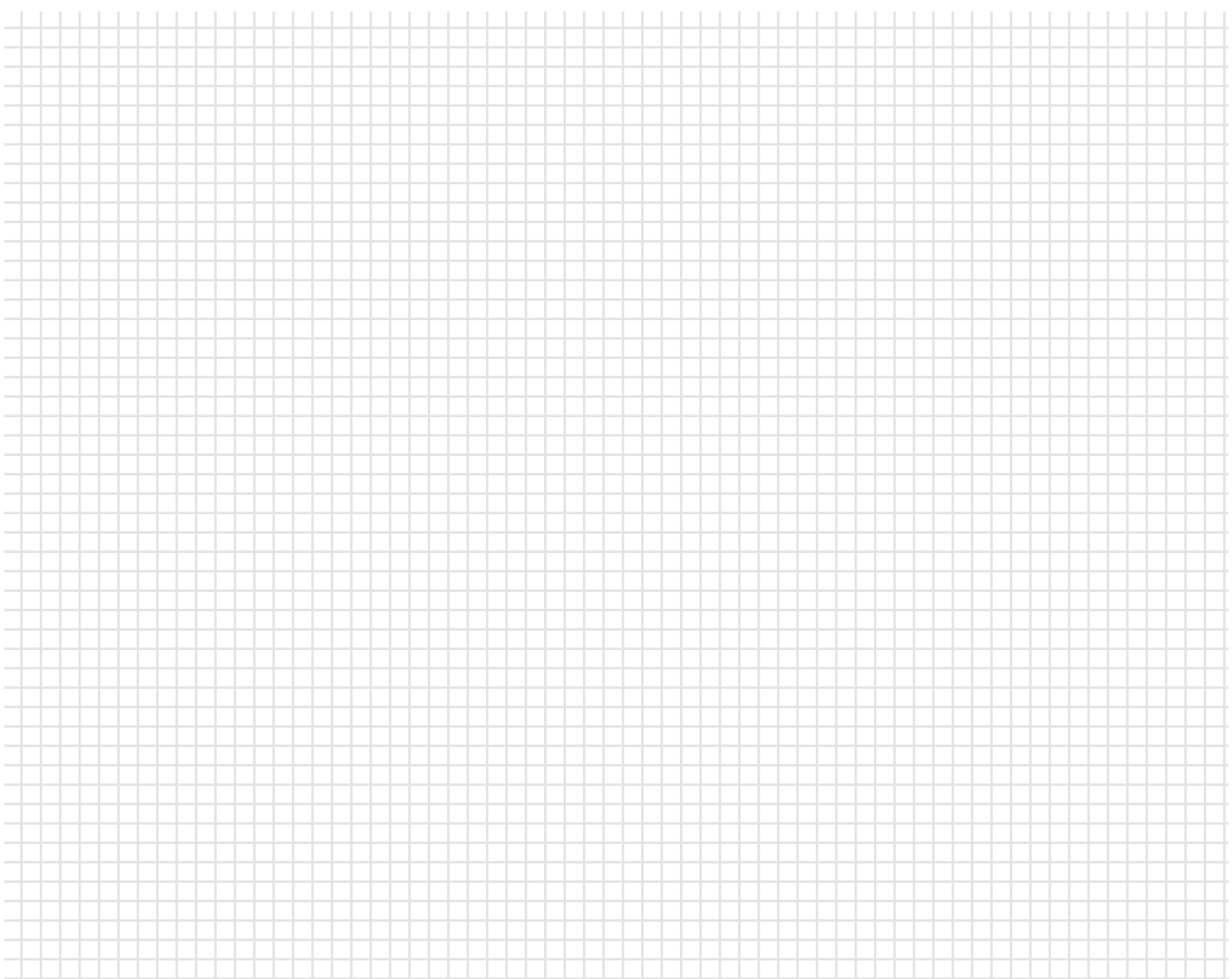
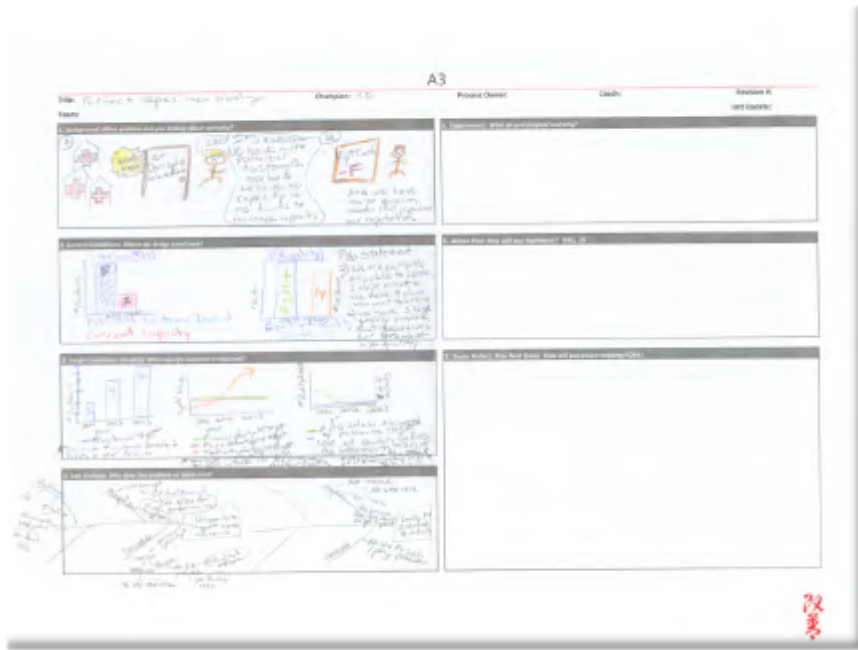
- ◆ Sitting at your table, take 10 minutes to read the San Vicente County Medical Center master case study and the “burning platform” mini-case of your choice.
- ◆ There are several burning platforms from which to choose:
 - San Vicente County Medical Center
 - San Vicente Emergency Department
 - Ocean View Ambulatory Clinics
 - San Vicente Surgical Services
 - San Vicente Lab and Radiology
 - San Vicente Home Services
 - San Vicente Cancer Center
 - San Vicente Kaizen Promotion Office

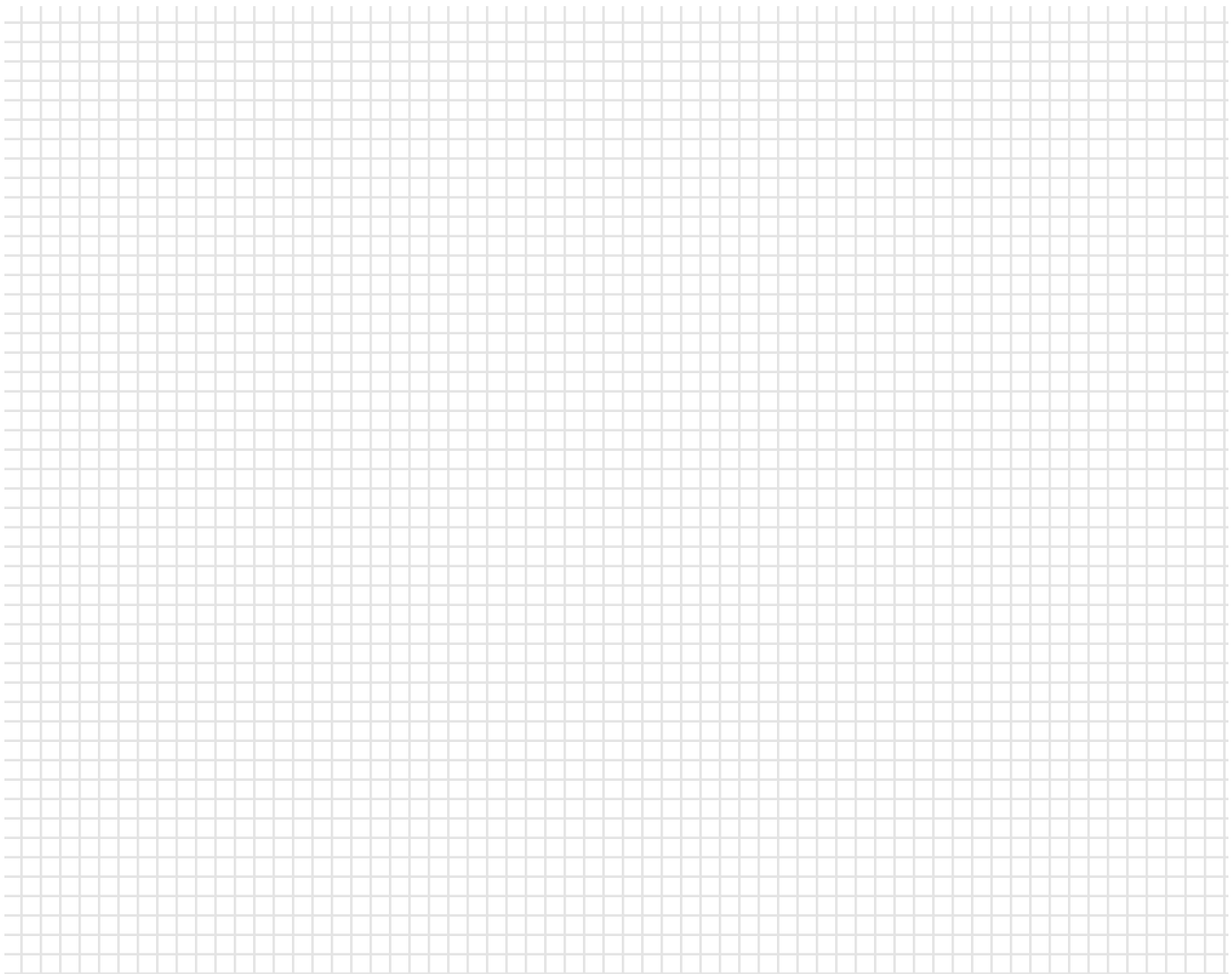
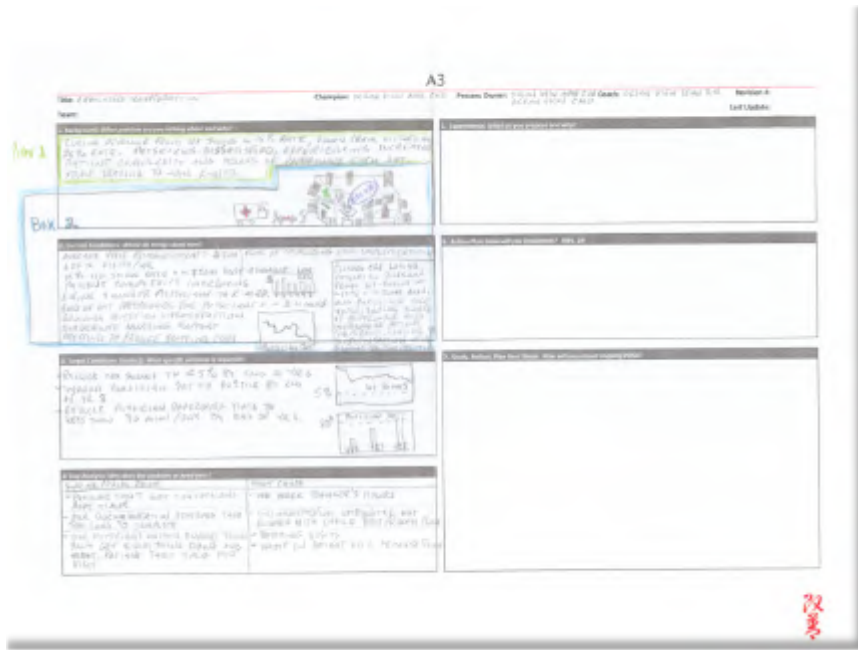


A large grid area for writing or drawing, consisting of a 20x20 grid of small squares.



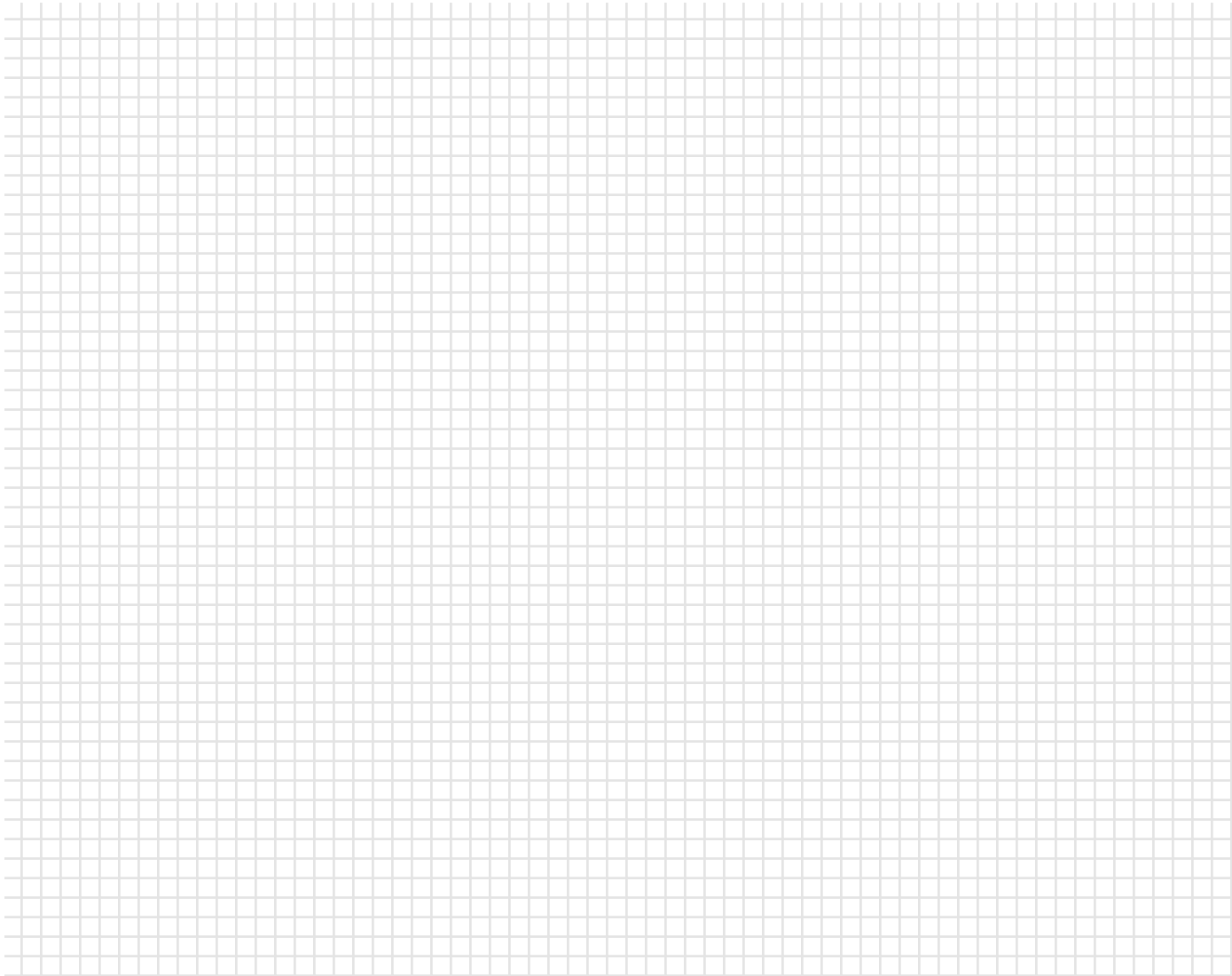
- ◆ As anyone can tell you, achieving complete agreement about anything is not so easy.
- ◆ The purpose of strategy deployment and the A3 documentation system is to memorialize A3 thinking about agreements to address the organization’s requirements, the “whats” and “hows” of strategic change.
- ◆ Without A3 thinking, A3s are mere busywork. So what is A3 thinking? It has five features:
 1. Scientific method: PDCA.
 2. Empirical, not theoretical.
 3. Evidence-based, i.e., based in Bayesian statistical decision theory—as is evidence-based medicine.
 - Rather than insist on clinical trials based on large sample sizes, in the practical science of running the “business” of healthcare, we recognize the need to act now. Consequently, we are willing to rely (to an extent) upon “expert opinion”, small sample sizes and small tests of change.
 4. Collaborative decision model.
 5. Servant leadership development model.





A3

Title	Challenge	Process Details	Check	Action Plan
<p>Problem Statement: In 2012, a report indicated that 20% of the population in the region was overweight. A further 10% were obese. This is a significant public health concern. The current situation is that the majority of the population is overweight or obese. This is a significant public health concern.</p>	<p>Current Situation: The current situation is that the majority of the population is overweight or obese. This is a significant public health concern.</p>	<p>1. Current Situation: a. Identify the current situation. b. Identify the current situation.</p>	<p>2. Current Situation: a. Identify the current situation. b. Identify the current situation.</p>	<p>3. Action Plan: a. Identify the current situation. b. Identify the current situation.</p>
<p>Goal Statement: The goal is to reduce the percentage of the population that is overweight or obese to 10% by 2015.</p>	<p>Current Situation: The current situation is that the majority of the population is overweight or obese. This is a significant public health concern.</p>	<p>1. Current Situation: a. Identify the current situation. b. Identify the current situation.</p>	<p>2. Current Situation: a. Identify the current situation. b. Identify the current situation.</p>	<p>3. Action Plan: a. Identify the current situation. b. Identify the current situation.</p>
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A3 EXERCISE: San Vicente County Medical Center case study

Instructions

1. As a group, we will review the A3 User Guide.
2. Once we have finished the review, please follow the A3 User Guide to draft the first two blocks of an A3-T for the burning platform that you have chosen to study.
3. Keeping your audience—your stakeholders—clearly in mind. Try to use visuals instead of words.
4. When you use words, follow the rules of good technical writing and make the correspondence of words and images crystal clear. Label your graphics thoughtfully, and in your prose refer directly to the labels. Leave nothing to guesswork.
5. Be inventive. Get messy. Neatness does not count, at least initially.
6. As Japanese lean consultants said to me when I was in training, “Make pretty last.”

The basics: catchball

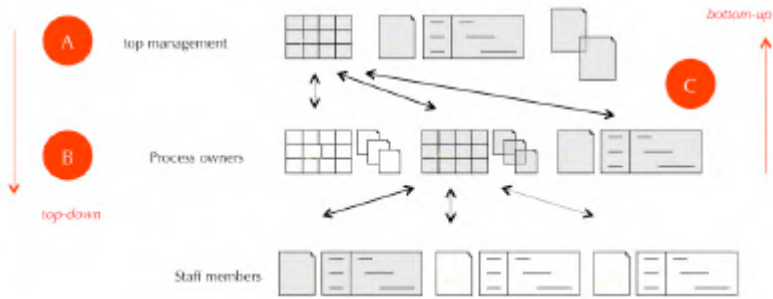


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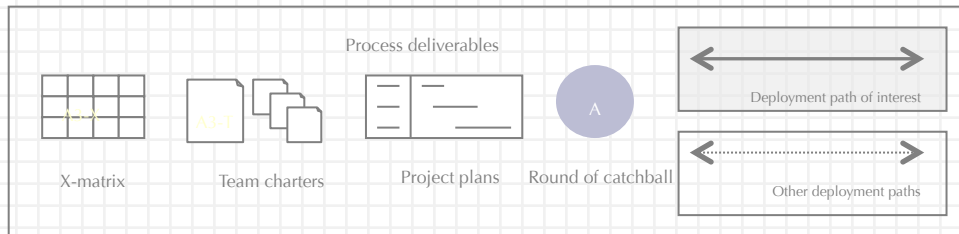


- ◆ “Catchball” is the process of negotiating the contracts and designing experiments that will be bundled into the lean organization’s system of nested PDCA cycles.
- ◆ If every organization is a system of bundled or nested agreements, then the work it takes to build—and continuously rebuild—an organization is negotiation.
- ◆ The catchball process centers on the drafting, editing and rewriting of the A3-T. The purpose of the process is to clarify and confirm the “whats” and “hows” of change with all stakeholders, including the leaders who initiate the process, the managers who will execute the proposed change, and other stakeholders who will be affected by change.

Catchball process



- ◆ Let's briefly review the catchball process.
- ◆ Then we'll "play ball".





- ◆ In a real catchball session, we would not necessarily take all clarifying questions or hear all of the advice. After the meeting, however, your yellow and blue stickies would be shared with the A3 author to take into consideration in redrafting the A3.
- ◆ In this picture, we see the aftermath of catchball, as an A3 author in Italy makes notes on the input received from his managers and team members.



CATCHBALL EXERCISE

Instructions

1. As a group, we will review one example of three or four burning platforms to highlight best practices and discuss common mistakes made in drafting A3-Ts.
2. As the chosen team member presents his or her A3-T:
 - Use the yellow sticky notes provided to record any clarifying questions you would like to ask.
 - Use the blue sticky notes provided to record any advice or improvement ideas you would like to share.
3. As time permits, I will call upon the class to share clarifying questions and advice.

Wrap up



A large grid area for writing notes, consisting of a grid of small squares.

