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Evidence-based change management☆

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Abstract
Evidence-Based Change Management is the science-informed practice of managing planned organizational change. It reflects two key principles: 1) Planned change is more likely to succeed when using science-informed practices, and 2) Regular use of four sources of evidence (scientific, organizational, stakeholder, and practitioner experience) improve the quality of change-related decisions. We describe two sets of science-informed practices: 1) Ongoing Actions used throughout the change process (e.g., goal setting, vision communication, and feedback/redesign) and 2) Phased Actions each timed to a specific change phase (e.g., early diagnosis or late-stage institutionalization).
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If youwant to go fast go alone;

if youwant to go far go together.

African proverb

This article presents evidence-based practices for successful planned organizational change. It reflects the body of change research distilled from the scientific literature and interpreted by its author team, an organizational psychologist and a practitioner-scholar-change leader. We guide change leaders at all levels in using change practices known to work and the multiple sources of evidence that inform good change decisions.

The Role of Evidence in Change Management

Poor Change Decisions From Untrustworthy Information

As the saying goes, “facts are our friends.” Yet even experienced executives sometimes make organizational changes based on limited or inaccurate information. Since the early management writer and business executive Chester Barnard, we have recognized how difficult it is for senior leaders to fully understand what is happening in their organizations. Will a proposed pay system really motivate

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Table 1 Four Sources of Change Management Evidence.

Organizational Evidence
Facts about the organization and its subunits. Critical for diagnosis, planning and monitoring progress at all phases of change.
Trustworthiness Criteria: Reliable (consistent and free from error) and valid (relevant to change).

Stakeholder Evidence
Concerns of people and groups implementing or affected by change. Findings from interviews and focus groups on change-related benefits, fears, costs and support.
Trustworthiness Criteria: Representativeness (i.e., by careful sampling) and use of unbiased methods (e.g., open-ended and non-leading questions).

The path to more trustworthy facts starts with asking key questions:
1. What is the problem we are trying to solve?
2. What is the evidence that this is the real problem?
3. What are possible solutions?
4. What is the evidence these solutions will work?

Scientific Evidence
Cumulative findings from scholarly research. Highlights practices and interventions shown to be useful in change.
Trustworthiness Criteria: Consistent findings across a body of studies. Two special research summaries take pains to assess the trustworthiness of findings: systematic reviews and meta-analyses. When these special reviews are not available, a sample of studies can inform change planning.

Professional Judgement
Insights from experts and others experienced with a specific problem or solution. Seek out knowledgeable professionals with expertise relevant to your change (e.g., specialists in quality control).
Trustworthiness Criteria: Not all "experts" are equal. The quality of a professional's judgment is a function of training/education, years of experience in a specific domain, and track record of success.

the desired behavior? How can work units follow through on a shift in strategy developed at the top? Layers of hierarchy, divergent job duties, blocked communication channels, and defensive silence all separate senior leaders from the people who must act and think differently for change to succeed. To this end, trustworthy information is critical to successful change-related decisions.

It's Tough to Learn to Manage Change Using Experience Alone

Change managers face a special challenge: It is difficult to become a successful change manager relying on your personal experience alone. Compare the change manager who oversees 2 or 3 changes in a year with the orthopedic surgeon who

performs a dozen surgeries a week. Who has more reliable and accurate knowledge about their task? It is obviously not the change manager. The surgeon repeatedly performs a set of tasks informed by clinical guidelines and gets clear feedback on results by following up the patient at hospital rounds or a next office visit. Repetition and regular feedback make it easier for the surgeon to learn from experience. Change managers have a tougher time learning what works and what doesn't by relying on experience alone. Each planned organizational change involves its own specific goals and activities. Clear feedback on its success may be tough to come by. Organizational change takes many forms from introducing new technology, incentives, or work practices to restructurings and strategic change. Its results, whether successful or not, can take months or even years to materialize. Last, change managers, unlike surgeons, until now haven't had evidence-based guidelines to follow. Since their actions often aren't systematic, change managers tend to have faulty understandings of why they got the results they did. For change managers then, experience alone is a poor teacher.

The good news is that change managers stand a good chance of making better change decisions by doing two things: 1) seeking trustworthy information about the organization, its stakeholders, and the change interventions they consider, 2) and applying this information using the evidence-based change guidelines we provide here.

What About Consultants?

The critical questions we raise about the expertise of change managers pertain to consultants too. There is little empirical evidence one way or another on the value of outside consultants in change management—research indicates consultants can help with knowledge transfer, but the quality of consultants can be difficult to determine. You will need to perform your own due diligence to ascertain the track record of any potential consultants you consider. What specific expertise are you seeking to obtain? What kinds of activities will they perform (problem diagnosis, data gathering, solution recommendation, etc.)? To what extent have the consultants you identify repeatedly conducted these activities, and with what kinds of results? What evidence do they offer regarding their own previous success? Ask for the scientific evidence on which they base their advice and any organizational indicators regarding the impact of their consulting work. For example, if you hire consultants to provide training, what evidence can they offer as to the efficacy of that training? (Preferred evidence includes pre/post comparisons with control groups). What follow up activities do these consultants rely on to ensure that their training transfers to new behaviors on the job? (Effective practices include use of coaching and follow-up assessment to support training transfer.) Probe for evidence directly pertinent to the activities you would hire consultants to perform.

Important Change-Related Information Comes from Multiple Sources

A success factor in effective change is use of quality evidence from multiple sources (Table 1). How do you know whether you can trust the information you plan to use to make change-related decisions? What can you do to *increase* its trustworthiness? Remember CEO Marissa Mayer's attempt to improve innovation at Yahoo—by stopping employees from working from home? If indeed Yahoo needed to increase innovation, why is more face-to-face work a solution? (Note Mayer's solution probably addressed the wrong problem. Organizational evidence and industry experts pointed to reverberating effects on Yahoo's bottom line from its losses to competitor Google, whose distinctive strategy Yahoo's leaders failed to address.) Acting without identifying the real problem is the root of many failed changes. An evidence-based approach means considering several possible problem definitions and evaluating their plausibility—by checking out scientific evidence, reviewing organizational data, consulting experienced practitioners, and gathering input from key stakeholders. Doing so makes it more likely you will identify a real problem in need of attention—and develop solutions to match.

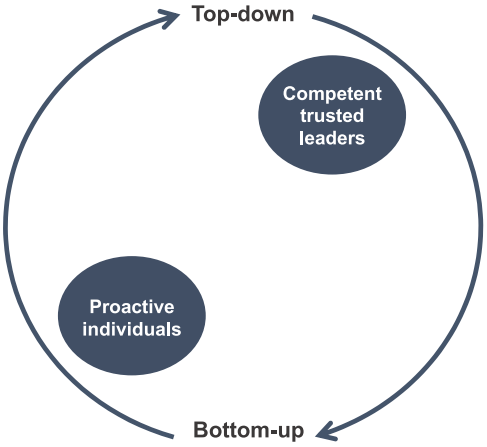

Figure 1 Multi-directonalchange.

Four steps help you obtain facts from multiple sources:

1. Get first-hand observations, your own and from knowledgeable others, regarding the problem the change should solve. Be like the manager who observes customer service encounters or back-office work to better understand performance issues and then talks to experienced industry professionals to gain their perspectives.
2. Obtain reliable quantitative metrics and representative qualitative data about the problem situation. What do performance metrics and customer comments indicate? Go beyond general impressions to drill down to obtain trustworthy organizational facts by unit or department and look at trends over time. Where are the hotspots and brightspots and what factors might contribute to their differences?
3. Gather information from various stakeholder groups (e.g., managers, employees, patients/customers) regarding their perceptions of the problem, concerns, and possible solutions. Assure people that speaking up is safe and no individual will be identified– and keep their confidence. Take pains to get representative information and diverse viewpoints. How do frontline workers understand the situation, what problems do they recognize? What do customers experience? Do these

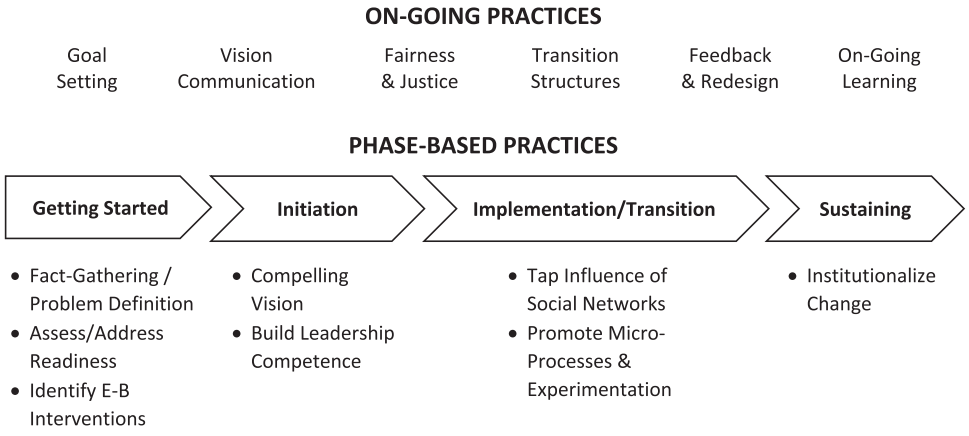

Figure 2 Evidence-BasedChangeFramework.

stakeholders tend to agree or do differences exist based on demographics, location, or nature of service, etc.?

4. Conduct a targeted search of the scientific literature. Your organization is unlikely to be the first to face challenges related to, say, innovation, efficiency, errors, or retention. What's known about their causes? And, since the solutions you are considering (e.g., training, incentives, process improvement, restructuring, etc.) are likely to have been used elsewhere, what's known about their effectiveness and success factors? We suggest checking out GoogleScholar (or even better, a research database like ABInform or Business Source Premier) and ask informed practitioners for keywords to consider. (See Barends & Rousseau on how to search.)

A change informed by trustworthy facts tends to make sense to change recipients and increases their commitment to change. Trustworthy facts are a key ingredient in effective change. Employees tend to trust managers who provide evidence for the decisions they make and using multiple sources signals the care taken to make a good decision.

Trust is a Two-way Street

Using trustworthy information is part and parcel of being a trustworthy change manager—and being trusted by your employees is a key component of successful change. Change fails for two common reasons: Employees don't trust their leaders and leaders over-rely on top/down initiatives because they don't trust their own people to act in support of change. Both generate doubt and fear, impeding employee commitment to the change. Low trust is a major reason why senior leaders often have poor information about what's really happening in their organizations. The quality of your organizational data and the information available from employees are likely to be deficient if employees are defensive or fearful. The advice we offer below in implementing evidence-based change doubles as direction for (re)building trust.

Trust is a key ingredient because change is made easier by the competence and commitment of *many*. The good news is that the odds of success increase when an organizational change has many leaders–not all of them executives. The change practices described here encourage change leadership across the board, from executives to middle managers to front-line workers. Change may begin top/down but fails if it stops there. Cheap talk about getting employee "buy-in" is not enough for real change. Bottom/up change initiated by employees can be slow, but ultimately succeed when it translates directly into day-to-day activities—and receives management support. When people are supported to craft new ways of working, change is easier. When change driven from the top stays in "command-and-control" mode, it sows confusion, doubt, and fear–not the capability and excitement that makes for successful change. Research finds that the more autonomy and active participation employees already demonstrate at work, the more able and willing they are to make changes in the activities within their reach. To be transformative, change needs both top/down and bottom/up efforts (Fig. 1), giving successful change its special dynamic and energy.

We now turn to the change process itself. We present a framework (Fig. 2) to help you think about change-supporting actions in two ways: Ongoing Actions throughout the change process and Phased Actions timed to a specific phase of a change. In the following sections we discuss each change activity and link it to the evidence (facts and information) used in implementing it well.

ONGOING ACTIONS THROUGHOUT THE CHANGE PROCESS

Five practices are change-enablers, supporting change at all its phases (see Fig. 2).

Goal Setting

Goals are powerful motivators of behavior. Setting specific change-related goals helps motivate and direct change. Goals can be organization-wide or locally developed. They are informed by organizational facts or industry metrics, practitioner experience, and concerns stakeholders have regarding valuable outcomes. They can help resolve common change problems, like persistent conflicts between units, lack of accountability for the change, or attempts by some to opt out of it. For example, setting diversity targets for faculty hiring in STEM fields can motivate collaboration across departments and cost sharing for advertising and faculty training to debias recruiting. Goals can help re-energize a change if momentum lags. For example, to promote a change initiative stuck in its early phases, goals might be set of increase training levels to 90% or broaden representation on a change task force to include all departments. For a goal to be motivating, people must see it as legitimate and appropriate. Goal acceptance is higher when employees trust their leaders, and where the goals make sense to them.

Two kinds of goals are pertinent to effective change. *Learning goals* specify change-related skills and competencies to be acquired (e.g., percentage of staff attaining specific competencies like technical knowledge or problem-solving skills). *Performance goals* target change-related behaviors and outcomes (e.g., shifting from paper to paperless (IT-based) processes, improved customer service ratings, meeting industry benchmarks for quality). If the change is complex, it often makes sense to first set learning goals to develop key competencies. Scientific findings, interviews with employees and managers, and organizational and industry information can highlight the kinds of learning the change requires. As critical competencies develop, focus can shift to performance goals, that is, targeting specific changes in behavior and results. Both learning and performance goals help monitor change progress—while the specific goals set can differ across change phases.

Communicating Change Vision

Vision refers to an expression of a compelling future that motivates the change. Across all change phases, frequent reference to the vision, in public communication and private conversation, directs attention and helps members make sense of the change. Consider the vision Paul O'Neill fostered at ALCOA, "Becoming the Best Company in the World." Though a coherent vision must be developed early (see Phased Action below, and as O'Neill conveyed it to reach the highest standard of ethics, efficiency, quality of services and products), communicating the vision continues throughout the change. Busy people don't always pay attention to the cues around them. For this reason, vision is best communicated repeatedly. Expressed as a redundant message over and over, as ALCOA's O'Neill did, vision can be referenced by the accounting VP who seeks to reduce the time needed to produce accurate quarterly reports and by the plant manager working toward a safer and cleaner work setting. Vision communication deploys numerous channels (media, all-hands meetings, one-on-one conversations with opinion leaders, etc.) throughout the phases of change. Stakeholder interviews and surveys help assess how far into the organization the vision has been received, levels of understanding and responses to it. You can ask stakeholders about the vision and ascertain what percentage are familiar with and can explain it. Such assessments can also indicate whether the reasons for the change are understood and accepted.

Vision communication is most effective when it reaches intact groups and social networks—at all hands meetings and department gatherings–rather than individuals as in the case of email. This communication is reinforced by actions that raise awareness of the vision (e.g., recognizing exemplary members who live the vision). Where employees experience the costs of change (e.g., high stress) or incur losses from it (e.g., job insecurity), vision communication promotes understanding of the reasons for change and more positive responses.

Promoting Fairness

Central to successful change is attention to fairness, that is, impartial and respectful treatment of people and mitigation of unequal outcomes. These manifest both in the respect and care employees and other stakeholders receive in the change's roll-out and its consequences for them over time. In change management, we recognize that psychologically speaking, "losses tend to be more painful than gains are good". This means that deviations from the present way of doing things often trigger a sense of loss, fear, or anger. Losses can loom larger than any promised benefits–particularly in the disruptive early phases of change. Gains are often lagged, coming later after successful change. Fairness warrants special attention because of change's often uneven consequences: Benefits and burdens are unequally distributed.

Several forms of fairness apply in managing change. *Distributive fairness* refers to how benefits and burdens are allocated. Promoting fairness means managing the potential losses that change can bring. You need to plan to make up for and provide support for the losses people incur, which can run the gamut from job insecurity, increased workloads, and disrupted career paths to the erosion of status and influence. (A plan may address people as groups or as individuals and involve developing alternatives from which they choose. Compensating people for losses whether by training or severance pay costs money. These funds need to be part of change planning.) Note too that if many employees already feel unfairly paid you may need to

compensate them more appropriately before launching the change. The second is *procedural fairness*, the consistency of the processes and criteria used in making change decisions, including providing people, regardless of rank or role opportunities to speak up and correct information used. Reliable and accurate information is critical to change decisions, and procedural fairness helps improve both. Committing to fair processes also helps to (re)build trust if prior change experiences have come up short. The third is *interpersonal fairness,* respect shown to individuals and groups. Since losses are psychologically weighted, respectful acknowledgement of losses and active efforts to offset them can signal fair treatment. You first may need to gather information via interviews and focus groups regarding the concerns affected employees have. Attending to fairness early in the change process sets the tone for what employees anticipate regarding the subsequent change. We know that your most loyal employees tend to focus on the fairness of change processes. Maintaining employee loyalty through fair processes helps alleviate negative reactions to change.

Transition Structures

Change requires creative use of temporary arrangements or "transition structures" to fill short-term needs. Transition structures take many forms from spot incentives, temporary task forces, or rotational assignments that help people act and share information in new ways. One airline used an array of transition structures from an initial top management team (labelled "the change samurai") who explored opportunities across the organization to local task forces that identified many "small win" projects.

Several transition structures can be used at the same time to build change capability. Short-term experimentation can be pitched as a "pilot" to help create new practices employees can learn from, easing acceptance and ultimate implementation. Try piloting alternative ways of onboarding new hires or conducting after action reviews upon project completion. Here it is important to assess the experiences of stakeholders with the pilot and gather organizational data on outcomes. Other transition structures include "rites of passage." Consider using well-timed celebrations and recognition events, as in the case where an old system goes off-line and a new one is rolled out. Rites of passage create a sense of punctuation or break between old and new, making return to former practices less likely. Another temporary arrangement is "special deals" granted to individuals in exchange for their support in redesigning their role or adjusting their workload. Special deals can provide well-timed resources to fuel change.

Feedback and Redesign Based on Change Progress Over Time

Periodic monitoring provides evidence of how change is progressing. It reveals whether the effort is on track or warrants modification and additional supports. Surveying employees and customers regarding change-related experiences and tapping organizational outcome data helps monitor change progress. Organizational metrics combined with participant feedback can be used in the redesign of change practices. Change participants should be involved in interpreting these assessments to better inform any needed redesign.

Organizational and stakeholder evidence can indicate where the change has taken hold, where it lags, and how members experience it. It is important to know how many people are participating in change-related activities (its scale) and the array of change-related activities they engage in (its scope). Organizational information like the frequency of new practice adoption and stakeholder views regarding their effects indicate whether the change has reached scale and diffused successfully across units. Reliable metrics obtained from multiple stakeholders offer feedback on the change's effects and improve its planning. For example, we might measure the learning employees show while assessing the change activities each department demonstrates.

Learning

All change involves learning. Recognizing gaps in knowledge and skills is important to change planning at all phases since shortfalls in skills and knowledge can emerge over time. Interviews, surveys, and performance monitoring can help identify learning needs at all phases. Training may be needed periodically, as the value of new skills is identified, or performance challenges appear. Frequent opportunities for reflection (e.g., periodic check-ins and regular attention at group meetings to what's working smoothly and what's not) contribute to learning. A university seeking broader use of technology in its teaching regularly hosted a one-day technology fair so educators and developers could show off their new teaching tools and learn from each other. Doing so disseminated innovation and led to more collaborations, thus increasing the capability and drive to make the change succeed.

Together, these five Ongoing Actions create energy, direction, and capability throughout the change process.

PHASED ACTION: CRITICAL STEPS AT THE RIGHT TIME

We now describe Phased Actions and their timing within the four critical phases of change: 1) Getting Ready, the preparation phase, 2) Initiating Change, the early launch, 3) Transforming or Implementation, the phase when major changes are implemented and replace old ways, and 4) Sustaining, the phase integrating change into the larger organization.

Managed well change progresses through phases that build on each other. These phases represent processes that individuals and groups go through in transforming how they think and act, leading to cumulative organizational changes. In practice, *steps within a phase can occur in various sequences*, for example, change readiness might be assessed before diagnosis occurs. And sometimes, a single

step from a later phase might be performed at the outset of the change process, like developing a vision or creating a small win early on to make a case for change. However, what happens in later phases largely depends on effective actions taken earlier—you can't institutionalize a change that was never fully executed. So, while a step may occur earlier or later than laid out here, the idea is to take the best actions you can at a given point in the change process. To show how these steps work, we present an actual case, an international company we call Ozwell with a recent history of failed change. Across the four phases of change, we describe Ozwell's experience.

Phase One: Getting Started by Fact Gathering and Assessing Readiness

A Fresh Start at Ozwell

With unrest inside the company and a deteriorating reputation outside, Ozwell, an international firm began its change process after a frustrating year of improvement projects that failed to deliver results. Having bet unsuccessfully on reorganization and cost reduction, Ed Buyens, the Chairman, looked for a fresh start. Despite pressure from the Board to come up with a fast remedy, both the chairman and CFO slammed on the breaks and said, "No new plans today. Let's reflect on where we are." After an afternoon of assessment and dialogue, the Board gave real attention to the situation and in the end realized the lack of direction and clarity was a recurring theme. Instead of making careful choices and setting priorities, the list of projects and tasks had grown, wearing out the organization. The Board agreed it was time for a more deliberate and disciplined process.

Seeking a fresh start, Buyens brought in Anne Martin, the HR manager and former consultant and university lecturer to help the Board think the issues through. She raised concerns about the Board's impatience and discomfort talking about making changes at Ozwell. With the Chairman's support, Martin got agreement to build a three-person team with knowledge of the business and complex change processes to serve as an initial change task force. With the Board as its sponsor, Martin's team took the time to involve clients and stakeholders in a diagnosis and follow up.

While the change team did its work, Martin asked to be allowed ***to teach*** *the Board to build their own change competencies. As part of this training, Martin prepared the Board to "train the trainers," helping them learn how to begin teaching others, to cascade knowledge about the why, what, and how of the change process throughout Ozwell. Several Board sessions focused on a change competence model and its themes of interdependence and coordination, feedback and learning and the dysfunctions that disrupt these processes.*

To develop change competence, participants had to learn to speak the same language to help better align their thinking about change and its meaning. The previous change had been replete with priority proliferation and lack of vision or direction. To create a distinct change process this time, the Board engaged in systematic searching, stock-taking, confronting and assessing the situation while it worked to learn how to speak the same language. Participants found they could tap a past assessment completed a year ago, which had gotten stuck when the team couldn't figure out what changes were really required. The Board worked through several possible diagnoses to discern critical needs in designing change strategy and goals. It recognized a lot had been learned (but overlooked) in previous change attempts.

A well-executed Getting Started phase puts the change on a sound footing. Its task is to drill down to the real problems the organization faces, remove impediments to change, and develop appropriate solutions. It starts with seeking out quality information about 1) the problem, opportunity, or crisis the change is meant to address, 2) the organization's readiness for change, and 3) the interventions (i.e., specific changes, like incentives, networking activities, teamwork activities, or automated processes) likely to work. This fact-gathering is best performed by a working group or task force whose diverse members have organizational or industry knowledge, critical skills (e.g., analytic and problem solving), and importantly, substantive leader support. At Ozwell, the Board and Anne Martin's team gathered information from prior meetings and existing documents while also interviewing major customers. At this phase, Ongoing Actions often include transition structures like Anne Martin's team and setting goals to support change activities. Now let's drill into the specific activities at this Getting Started phase.

#1 Fact gathering and problem definition

Can we agree it doesn't do much good to try and solve the wrong problem? Careful diagnosis avoids basing change initiatives on a poorly understood problem or misread opportunity. This typically means fact-gathering, that is, a proper diagnosis of the current state and what changes are desired. A change that comes out of nowhere, when senior leaders decide on a change without quality evidence including input from or communication with employees, undercuts trust and creates doubt that would-be change leaders know what they're doing. A good understanding of the problem or opportunity helps senior leaders communicate the case for change in the right way.

Obtaining information from multiple sources can reveal whether current assumptions regarding the "problem" square with the facts. Organizational silence driven by fear can make it difficult for senior leaders to gain a good understanding of current problems—making it a must to tap multiple sources of information. Diagnosis can mean

reviewing existing organizational data and engaging stakeholders, as Anne Martin and the Board did, to spot or better understand problems. A proper diagnosis can lead to new thinking about the organization and its need for change—and legitimate the change in the eyes of stakeholders. Conducted systematically and with integrity, a careful diagnosis helps design appropriate changes and fuels willingness to make them work. Diagnosis can involve bringing in outside consultants. It is critical that whoever conducts the diagnosis follow an evidence-based process—obtaining multiple sources of information from organizational data to stakeholder concerns.

#2 Assess and address the organization's readiness for change

Assessing change readiness and working to overcome its deficiencies is an important step in Getting Started. Readiness refers to the current capacity of the organization and its members to undertake what the change demands. People need mental and physical bandwidth to do the hard work of change. Some parts of the organization are likely to be more ready than others. Readiness has implications for the scale, scope, and timing of change. Assessing readiness can help change managers identify needed adjustments in change's scope or scale to help less-ready or already busy people to undertake the effort change requires. A key limitation at Ozwell proved to be the numerous projects undertaken in the past year that stretched people thin. Reprioritizing the long list of deliverables helped increase Ozwell's readiness.

Pre-existing conditions can make a preferred change too big a lift –at least at present. Current employee stress levels are a readiness indicator: Overworked or distracted people make poor change recipients and lousy change leaders. High task demands or job insecurity make coping with change difficult. Staffing shortages or confusing signals from existing initiatives can overwhelm people. For this reason, efforts to create a sense of urgency, a frequent tactic in top/down change, often backfire. Instead, change may require upfront investment, planning and support to increase readiness. Open positions may need to be filled and pay disputes settled before change can be undertaken. Indeed, change may need to be scaled back or rolled out more slowly and with additional supports to ease implementation.

A troubled change history undermines readiness, causing people to actively reject even a promising change out of doubt and fear. Special efforts like those taken at Ozwell can be needed to separate the present change from the past. Think of what to say or do that shows how this change will be handled better and why it should succeed. Upfront investment in things employees care about—from sprucing up their work settings to more access to supervisors–help signal that this change is different. Credible actions by leaders reduce fear and mistrust, activities we described as the Ongoing Action of Promoting Fairness above.

Readiness is higher if the organization has a track record of successful change. When organizational history and stakeholder experience indicate past change success, this information supports a change story promoting the organization's efficacy and capability. Shining a light on bright spots, particular successes in the early change roll out, also helps build confidence.

The change skills of senior leaders are a third factor in readiness. Although large scale change typically involves some form of training, too often this training only targets technical change features—not the *change competencies* of leaders. Managing change well demands skill, insight, and self-reflection, particularly on the part of senior leaders. The readiness of leaders informs a key step below (#4 Developing Change Leaders). If the organization has a successful change track record, advertise the process previously used and how learnings from then apply now. But a leadership team without this track record requires investment in developing their change skills—the predicament Ozwell faced.

How well Getting Started steps are performed depends a good deal on the capabilities of change leaders and the quality of information already in hand. The scientific evidence on which this article is based is quite clear that competent and trusted change leaders are a condition of successful change. That competence and trust makes it easier to obtain relevant information and take appropriate action at the start. Much of the early efforts at Ozwell focus on building change capabilities at the top. These efforts were designed to cascade though the organization, as senior leaders worked to model change competencies like fact gathering and open communication to members at lower levels.

Barriers to readiness require *early* attention. Initial remedies to make up for readiness deficiencies increase the odds of success. These remedies work best if they precede the heavy lifting of actual change implementation. Take advantage of any lead time you have.

#3 Identify evidence-based change interventions

Developing appropriate change solutions is next. A careful diagnosis reveals likely targets for intervention (e.g., skill gaps, mis-aligned goals, coordination issues, etc.) that if addressed can move the organization closer to a preferred state. Results depend on using appropriate change interventions and implementing them well.

Identifying the changes likely to work is helped by looking into several kinds of information. Once the problem (s) addressed by the change are identified, a task force of diverse stakeholders experienced with the problem can help identify plausible solutions. We recommend supporting the information needs of this task force by providing them

with staff who can access search for and gather information on possible solutions. A search of scientific evidence can help identify interventions of known effectiveness for common change problems (e.g., incentives, work redesign, process changes). We suggest that the task force or their staff work with a business librarian to access useful evidence from scientific research.

Another important kind of information is whether parts of your organization already have practices in place that work. For example, if the change target is a more inclusive organization, are parts of the organization already successful at inclusion? The task force can use such information to better understand what promising practices coincide with change success. When promising solutions are identified, consider running tests to see which work better. If your change problem or opportunity is truly novel, you will need to conduct in-house tests to identify effective interventions. In the case of Ozwell, the change task force expanded its membership as their diagnosis identified the need for clearer focus on customer-facing processes. Useful ideas for solution identification came from gathering organizational, practitioner and stakeholder evidence on current processes and their outcomes.

In developing appropriate solutions, we note that "bundles" tend to work better than single interventions. Many changes require a combination of interventions to be effective. Don't think in terms of a "silver bullet," that is, a one-and-done intervention. Think about combining mutually supportive interventions (those bundles we refer to). For example, the effects of training are typically strengthened when accompanied by coaching. Goal setting is more effective with clear and actionable feedback is provided. These combinations help provide needed energy and capability to reach and sustain a critical threshold for change. At Ozwell, the CEO and the Board, came to recognize the need to develop change competencies at all levels, shifting manager and employee attention from their long list of tasks and deliverables toward creating more consistent and effective processes to serve customers.

Successful interventions tend to bundle three features that promote change effectiveness: *Ability* (increasing skills to behave in new ways), *Motivation* (increasing willingness to behave in new ways), and *Opportunity* (making it easier to behave in new ways by adding supports and removing barriers). At Ozwell, to implement more effective processes in serving customers, staff were trained to better identify customer needs (Ability), rewarded by their managers for doing so (Motivation), and provided with IT supports, service routines, and sufficient time to engage with customers (Opportunity). Such change bundles can create a wrap-around experience to help employees engage in the change.

Beware of adopting only part of a change intervention and not key success factors that help make it work. (In science, we refer to this problem as "intervention compliance.") Organizing work into teams, for example, without adequate training, clear goals, and communication support, ignores research findings on effective team development. We now move to the next phase Initiation of Change.

Phase Two: Initiation by Building Change Capacity and Expectations

The Roll Out at Ozwell

Together Anne Martin and members of the Board worked to train Ozwell's top 30 managers in change competencies. The effort reinforced to these top managers that they were being trained so they could in turn train their subordinates. After helping them understand key change processes (Ongoing Actions and Change Phases), the top managers were presented with the diagnostic information previously shared with the Board. In collaboration with Board member/trainers, these top managers worked to develop a common change case, a shared diagnosis and change priorities, and measurable assessment criteria.

A vision of the future emerged around balancing customer service quality and innovation with employee development and security. Quality Through Partnership became a watchword for the future. Ozwell's top managers came to recognize that leadership was an activity not a hierarchical position. Participants laid out the types of leader activities the needed change required. They drafted a rough outline of the change process over its phases. Another key idea was the role of these leaders in bridging the gap between one change phase and another, helping to ensure the energy, time, money and means to carry the change forward. Next, the 30 managers below the top 30 were also trained. The top managers took the lead in this training. This new group worked to flesh out and test drive the vision, joining forces with top managers and some Board members to vet ideas and refine the plan shaping up.

The top 60 managers with Martin and the Board's support focused on two lines of activity. The first was on how to better support their own subordinates to engage in the change including ways to reprioritize activities and provide development opportunities. The second focused on kicking off early change efforts to learn by doing and show results. They identified a set of pilot projects (over a dozen) that targeted improved services to existing customers and explored new markets. Goals were set regarding project launch targeting near-term completion (from a few months to six to expose parts of Ozwell to new processes and set the stage for service innovations). To balance freedom of action with security, they sought to create reliable processes that allowed learning and experimentation and demonstrated outcomes.

Once the change is teed up, the Initiation phase increases capacity for change. Initiation develops new expectations on the part of managers and employees regarding their roles and coincides with what is often thought of as the *unfreezing* phase of change. Senior leaders or a change task force may oversee Initiation, inviting broader stakeholder participation and information sharing. Ongoing Actions at this phase include setting change goals, communicating the vision developed at this phase, and paying attention to fairness as solutions are rolled out.

4 Develop change leadership throughout the organization

Leadership is central to change, whether exercised by managers in positions of authority or by staff who step up locally. Effective change leadership occurs at multiple levels, including senior leaders, mid-level managers and influential rank and file employees. All can serve as change agents and role models. Trusted and supportive leaders create a psychologically safe environment, supporting employees to speak up and learn from mistakes while practicing new ways of working.

Don't assume people know how to be change agents—train and coach them. Targeted leader training and coach helps at all levels. Its focus should be on 1) creating new expectations regarding the roles people will play in the change, 2) helping people cope with change, its demands and uncertainties, and 3) developing the know-how to introduce, engage and manage changes. Useful skills include how to run and evaluate trials and experiments (e.g., useing randomization and reliable outcome measures). Leaders often struggle to cope with the demands change brings, particularly when existing job demands are high. These leaders need to be ready for the mix of activities involved in change initiation (e.g., communication with stakeholders) and execution (experimentation, periodic assessment, etc.). Change leaders working together with different competencies is a plus. Successful change in firms from Lufthansa to GE have teamed senior leaders with HR and experienced consultants to conduct in-house change training. Be sure to conduct pre- and post- tests related to training outcomes to gauge participant learning and then perform follow-up assessments as change goes forward.

#5 Develop a compelling vision

A compelling vision is a success factor in evidence-based change. It expresses a desired future that members collectively find meaningful. This vision should be coherent, emotionally resonant, and stimulating. Good change leaders do not make up visions from scratch. Instead, they strive to thread heartfelt values throughout the change initiative. In formulating a compelling vision, information from internal stakeholders from younger staff to veteran managers can help identify salient features. In the case of Ozwell, a vision that balanced service quality with employee development and security met critical needs across stakeholders and aligned with shared values.

Vision articulates a preferred future members can get behind. Consider the so-called vision of "improved shareholder value," likely to appeal to company investors but not necessarily employees. Contrast it with a vision containing the theme "quality service," likely to broadly appeal to employees and other organizational stakeholders (including investors). A vision reflecting such deeply held values like quality or excellence is compelling, particularly if reinforced throughout the change process–not just cheap talk. A compelling vision is grounded in the shared hopes and aspirations of the people you would inspire and promotes positive beliefs regarding the reasons for change. Considerable agreement exists on how to communicate a vision, an Ongoing Action described above. Keep in mind, however, that a vision that is not *shared* is no vision at all—it's a failed change manager's *hallucination*!.

Phase Three: Transition to Expand and Scale up Change

Ozwell Over the Next Year

Ozwell's managers and employees next worked to extend the change effort broadly. The vision of balancing freedom and security surfaced a variety of opportunities to think differently about company practices and decisions. Teams throughout Ozwell worked to expand the change case and proposed strategies to more people, using lessons learned from the initial round of process changes. Martin and her team kept an up-to-date roster of the change projects and activities launched at Ozwell, frequently visiting various departments and asking task force members to report on local change activities. They were able to map current and planned change efforts, getting insights into what seemed to work well and where the change might need additional support.

Two different kinds of efforts emerged in support of the change at Ozwell. Focused change projects (referred to as "online activities") built collaborations between units on activities that were formally prioritized and staffed. Creating cross-department linkages that better served specific lines of business, these activities reduced in-group/out-group barriers and broadened the sense of collaboration. Assessments were structured for each project over time to monitor progress and encourage learning. In contrast, capacity-building activities (referred to as "offline") identified useful new ways of thinking as well as stumbling blocks to overcome. One example was group reflections regarding assumptions and practices that blocked change. Another was network-building activities like all-hands meetings and periodic huddles to surface opportunities to proactively solve problems. Offline activities helped people see their position and role within the bigger change picture. Management support and reiteration of the vision brought clarity to these deliberations. A regular theme in both online and offline activities was the need for fair process, providing affected people with a voice and attention to their concerns.

The task of Transition is to ramp up implementation of new practices. Typical Transition activities include getting units up to speed on new processes, expanding training to more people and areas, and encouraging experimentation to launch new ways of doing things. This phase can make full use of Ongoing Action. Setting short-term (or project) goals helps make faster progress during this phase. It helps to map out the reach of change activities at this stage:

where training has occurred, and where it lags, the change-related activities currently happening and their location. You will probably find some uneven implementation across areas. Setting targets to increase the number of people using new processes helps to expand the scale and scope of the roll out. Because Transition is often disruptive, its psychological and material costs loom large. This makes the Ongoing Action of Fairness processes critical to offset losses that change can create like elimination of positions or adjustment difficulties. At this phase, employee-manager conversations provide opportunities to check in and offer needed support including additional training, workload adjustments or future opportunities that make the change more attractive.

#6 Tap the influence of social networks

Change is accelerated by tactics targeting social networks, reaching out to groups rather than just individuals. Participation in change activities by intact groups levers the social influence networks promote (e.g., physicians are more swayed by what other physicians say than they are by nurses or pharmacists). Having network representatives on change task forces further levers these ties. The mix of online and offline activities at Ozwell engaged existing social networks as well as promoting new ties. Communicating with intact groups (all-hands or department meetings) helps energize them and create shared understandings. A critical issue is helping people develop the ability, motivation, and opportunity to practice new behaviors—something more easily done when those around us are committed to do the same. Shared abilities, motivation and practice opportunities are more likely when an entire network is engaged. Networks can be used to both broadcast information across the organization (e.g., the change's purpose) and narrowcast targeted messages to group members (e.g., how adjustments and downsides will be managed).

Working with social networks helps identify formal and informal leaders and their potential change roles (e.g., champion, advisor, passive acceptor). Change agents we know create stakeholder maps to identify which networks are important, where their contacts are, and the role they hope the network members will play in the change. The influence of change agents derives not only from their personal skills but also from their social connections. Group attachments (e.g., physicians, nurses, academics) open people up to influence by other group members. Members of highly cohesive teams tend to be swayed by appeals directed to the team and by change efforts targeting the team as a whole. Training an entire surgical team on using a communication checklist leads to more uptake of that practice than training only a few. Connecting people with influential members of their network who support the change also helps move fence sitters to endorse the change.

The Ongoing Action of Transition Structures can be enabled by social networks, as exemplified by task forces with representatives from diverse stakeholder groups. In the Transition phase, such committees might be tasked to participate in intervention design and actively provide information to and from their groups. A well-constituted task force of a dozen can reach hundreds of others—if tasked to communicate about the change with their respective groups.

7 Promote micro-processes ("small wins") and experimentation

Bottom-up, local, or micro processes are essential building blocks in organizational transformation. Lower-level employees can introduce improvements in the way work is done, providing visible signs of a change's potential. Leader responsiveness to employee-initiated activities is a huge asset in promoting local innovations or "small wins". The early sets of pilot projects at Ozwell gave visibility to its support for new ways of working. Such activities can stimulate proactive employees to serve as "quiet leaders," launching their own bottom/up initiatives. Through micro-changes, employees use their workplace savvy to make local adjustments that support broader change plans. Clever, effective change interventions can emerge from employees themselves.

Small wins are a micro-process, where change progresses via multiple tweaks, pilots, and other small interventions. One airline overhauling its operations encouraged innovations in dozens of areas and over 60 local projects were launched in its transformational first year to improve operations—providing vivid proof that change was possible and the kinds of changes that worked. In such experimentation, failure is possible, and indeed inevitable in pursuit of workable solutions. Small-scale interventions are in line with notions of user-centered design, where new ways of doing things are adjusted to local conditions. In the airline case, a host of tweaks for cabin management and food service paid off in the form of more consistent yet lower cost service. To engage this micro-process, employees can be encouraged to address local issues in their workgroups and at regular meetings.

Phase Four: Sustaining the Change

Capturing the Gains at Ozwell

Changes to Ozwell's operations and ways of working energized managers and employees alike. But rather than assume the change was working as planned, Anne Martin called the CEO's attention to the need to assess the gains from change to see whether its goals were being met, making sure that new practices operated as intended. It was also time to capture what had been learned about new ways of working and identify speed bumps and gaps to make Ozwell's processes even more effective.

Sustaining new practices sometimes conflicts with existing performance management and career systems, which

reward people for old ways of doing things. Ozwell was no exception: Anne Martin and the top management team identified potential disconnects between the existing Ozwell HR and management systems and the new processes. They began the work of beginning to redesign both Ozwell's hiring and training practices as well as its reward and performance management systems. Last, to capture what was learned in the change process, the CEO commissioned a series of focus groups across Ozwell to help write up a summary of lessons learned to be shared with both new and current managers and employees.

The task of the Sustaining Phase is to scale up the change, help it last, and realize intended goals. Tying up loose ends and integrating new change features into the organization's other systems (e.g., HR, career paths) positions it to capture the change's intended gains. With the heavy lifting largely done, it is time to do what's needed to capture the benefits of this hard work. Ongoing Actions should be well evident here, particularly goal setting to direct attention to desired change results, feedback and redesign efforts to improve implementation, and learning. At this phase, for example, now that cross-functional teams are built, we can support them to move beyond solving reactive problems to engage in more strategic proactive tasks. The Ongoing Action of Learning calls for collective reflection to capture lessons learned. This learning should be documented and shared.

#8 Institutionalize to sustain the change

Sustaining change means integrating it into the broader organizational fabric. This coincides with the *refreezing* stage of change. The task of Institutionalization is to align the changes with the organization's current systems and infrastructure including its hiring practices, performance management, and accounting systems. In doing so, we remove impediments to the full uptake of the change (e.g., eliminating legacy systems like the paper-based routines that impede IT transformation; altering career paths to reflect new competencies the change created). Incorporating the change into the firm's standard practices promotes uptake by those employees and managers not yet fully on board. Employees slow in taking up the change tend to get on board once new practices become routine. If the only way to get reimbursed for expenses is to use an on-line system, people will use it. Institutionalization makes the change sustainable, making it less likely that new leaders or members will unwind hard-won change efforts. New hires also may need to be trained in change-related skills and practices.

Institutionalization sustains new practices and can improve them. As people master new ways of working, new benefits can emerge. For example, as workers become more comfortable with cross-functional teams, teams that once focused on solving existing problems can shift their attention to more forward-looking opportunities. Moreover, this change is not likely to be the last: the Sustaining phase is the right time to reflect on lessons learned. After the heavy lifting of making change happen, we can gather what's been learned for the future.

Conclusion

Quality evidence and the practices it gives rise to transform the change process, build trust in change leaders and actively engage members at all levels. Your actions as an evidence-based change manager will be increasingly effective as you become more reflective, critical, and curious about your own organization, its processes and stakeholder experiences. Through trustworthy evidence and an evidence-based process, change becomes more manageable—making your experience as a practitioner of change more valid and reliable. We close with a quote:

> "It is not the strongest who will survive but those who can best manage change." (attributed to Charles Darwin)

Suggested Readings

This article is based on scientific evidence reviewed in two sources: Steven ten Have, Wouter ten Have, Anne-Bregje Huijsmans, & Maarten Otto, *Reconsidering Change Management: Applying Evidence-Based Insights in Change Management Practice* (2016, Taylor Francis), which summarizes 40 rapid evidence assessments conducted by the professionals at ten Have Change Management; and Jeroen Stouten, Denise M. Rousseau & Richard De Cremers, "Successful organizational change: Integrating management practice and research literatures." *Annals of the Academy of Management*, 2018, *12*(2), 752–788, which synthesizes the practice and scientific literatures on managing change. Eric Barends & Denise M. Rousseau's *Evidence-Based Management: Helping Make Better Organizational Decisions* (2018, Kogan Page) helps change managers to better access all relevant forms of evidence used in successful change. Ed Locke & Gary Latham's (2013, Routledge/Taylor Francis) book *New Developments in Goal Setting and Task Performance* provides insights into effective use of goal setting, a key change practice.

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