Applying the Formula for Change to Sustain LSS Improvements

Mark Nestle, Global Director - Productivity, Praxair, Inc.
Presentation Objectives

✔ Understand the Gleicher/Dannemiller “Formula for Change”

✔ History of Gleicher/Dannemiller “Formula for Change”

✔ Learn about each of the basic formula components

✔ Introduce new 4th factor to the formula $Hc$

✔ Compare to some other popular change methodologies

✔ Discuss tools for each component to address resistance to change, helping assure LSS gains are sustained

A simple, elegant & robust formula to reduce natural resistance to implementing changes
Praxair at a Glance

The largest industrial gas company in North and South America and one of the largest worldwide

A Fortune 250 company with 2015 sales of $10.8 billion

Doing business in more than 50 countries

26,000 employees

1300 GBs + BBs worldwide

One million customers worldwide

Dow Jones Sustainability World Index - 12 Consecutive Years

Carbon Disclosure Index - 7th Consecutive Year

Among the top 50 in “Achievers 50 Most Engaged Workplaces™ in North America”

Manufacturing 24%

Metals 17%

Energy 14%

Aerospace 3%

Chemicals 10%

Electronics 7%

Healthcare 8%

Food/Beverage 8%

Other 9%

Manufacturing 24%
What is Change Management?

- **Change** is defined as:
  
  To make different in some particular way

- **Management as a verb** is defined as:

  The act or art of skillfully administering, supervising, handling or directing the execution of activity

“What if we don’t change at all ... and something magical just happens?”
What is Change Management?

- **Change Management** - the systematic use of tools and techniques to guide a transition to some desired future state.

- Initial management of how the change was introduced is a key factor why most changes don’t stick or rapidly degrades.

- Laying a good foundation for improvements cements understanding and eases the impact for those affected.
Murphy’s Laws Impact Change

Murphy’s law and its corollaries directly relate to change management:

- **Anything that can go wrong, will go wrong**
  - Experience often leads to inherent pessimism

- **If it has happened once, it can happen again**
  - Memory of past issues lingers and can cause self-fulfilling prophesy

- **If something can be understood differently by someone, it will be**
  - Communicating shared understanding and vision is critical

- **Everything goes wrong at the worst time**

- **If you can make time to correct an error, you had the time to prevent it**
  - Error-proofing the new program/process launch reduces failures

**Skillfully managing changes ensures productive gains are sustained**
Who’s Formula is it?

- Originated by David Gleicher in late 1960’s while at Arthur D. Little
- Published by Richard Beckhard\(^1\) & Reuben Harris\(^2\) in mid-1970’s
- Refined by Kathleen Dannemiller\(^3\) in 1992
- Often incorrectly called the Beckhard or Beckhard-Harris formula
- More accurately it should be the **Gleicher-Dannemiller formula**
- Original formula created by Gleicher sadly was not very intuitive:

\[
C = (ABD) > X
\]

- \(C\) = Change
- \(A\) = status quo dissatisfaction
- \(B\) = desired clear state
- \(D\) = practical steps to the desired state
- \(X\) = cost of the change

Source:
Evolution of the Formula for Change

- Dannemiller’s refinement to Gleicher’s formula revised it to:
  \[ D \times V \times F > R \]
  
  - \( D \) = Dissatisfaction with the status quo (present)
  - \( V \) = Vision of future state
  - \( F \) = First concrete steps to the desired state
  - \( R \) = Resistance to the proposed change

- The left side factors must all be present to sufficient degree to overcome the existing resistance to change

  \[ D_P \times V_F \times F_S > R_C \]

- \( F_S \) is sometimes referred to as Starting Effort (\( S_E \)) - the amount of work it will take to begin tangible progress to the future state
Adding a New Factor

- LSS and Quality improvement projects have driven change for years
  - Estimates\(^{(\text{Conner})}\) show 70-80% of changes degrade or don’t stick at all

- The Gleicher-Dannemiller formula ($D \times V \times F > R$) has intuitive simplicity, but lacks a component considering past experiences

- Introducing a new fourth factor: $H_C$ (History of past Changes)
  - Captures the impact of prior changes actions in the local work group

\[
D_P \times V_F \times S_E \times H_C > R_C
\]

- $H_C$ component has project leaders assess perceptions from past changes, both positive and negative impacts
Why add $\text{H}_c$?

- Should not consider the future without understanding the past

- Many changes are still led top down
  - Without their understanding of the opinions and emotions at other levels in the organization

- Change Management’s ‘brand’ may be worn out or damaged
  - Do not assume people will just jump onto your new bus

- The increasingly mobile work force bring in their emotions about the past from other organizations

- The internet and globalization result in faster information flow
  - A change management failure in 1 place can instantly go “viral”

Remember scar tissue is the toughest skin.
Comparing Other Change Methodologies

Kotter’s Eight Stage Change model

- Establish a Sense of Urgency
- Creating the Guiding Coalition
- Developing a Vision and Strategy
- Communicating the Change Vision
- Empower Broad-based Action
- Generating Short-Term Wins
- Consolidate Gains / Never Let Up
- Anchor New Approaches in Culture

Kubler-Ross model (Grieving)

Shock > Denial > Anger > Bargaining > Depression > Acceptance

If a strong sense of ownership in the status quo exists, emotions can run high so coming to terms with change can be similar to the grieving process so factor that into the action plan time schedule.
### Comparing Other Change Methodologies

<table>
<thead>
<tr>
<th>McKinsey’s 7-S model</th>
<th>Prosci’s ADKAR</th>
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<tbody>
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<td><strong>Strategy</strong> - the plan</td>
<td><strong>Awareness</strong></td>
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<tr>
<td><strong>Structure</strong> - the organization</td>
<td><strong>Desire</strong></td>
</tr>
<tr>
<td><strong>Systems</strong> - daily actions/procedures</td>
<td><strong>Knowledge</strong></td>
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<td><strong>Shared Values</strong></td>
<td><strong>Ability</strong></td>
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<td><strong>Style</strong> - leadership style</td>
<td><strong>Reinforcement</strong></td>
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<td><strong>Staff</strong> - employees and support</td>
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<td><strong>Skills</strong> – employee competencies</td>
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- Both models address the action plan and the skillset of the organization.
- Neither clearly tackles human emotions or natural resistance to change.
- Neither model openly considers the group’s current state or history with continual improvement or change.
- ADKAR considers desire to change, not how to deal with lack of desire.
- The premise for both is the change will be perceived as good & needed.
Asking the Seven W’s Helps Manage Change

✓ **What** is supposed to happen?

✓ **What** is different from before?

✓ **Why** should I care? or **What** will I lose?

✓ **What** do I need to learn or do differently?

✓ **What** will we do to monitor progress?

✓ **What** will we do if it does not work?

✓ **When** will the changes begin?
Maximize Positives in Formula for Change

Key points to maximize advantages for each component to build support and momentum to successfully implement the intended change

$$D_P \times V_F \times F_S \times H_C > R_C$$

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| $D_P$  | Dissatisfaction with the Present (status quo)  | • Motivates people to change – burning platform, As-Is VSM, Kano model,  
• Communicate the negative impact of not making the change  
• Benchmark to show process not as good as perceived – customer feedback, COPQ or reliability data, etc. |
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| VF     | Vision of Future state | • Used to pull people toward the future adding direction to change;  
• Personalize the vision – What’s in it for me? ...So I care  
• Leverage “creative tension” between present and vision (Senge); |
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• Leverage “creative tension” between present and vision (Senge) |
| **F<sub>S</sub> or S<sub>E</sub>** | First concrete Steps or Starting Effort to the future state | • Make the 1st steps clear, decisive, easy to grasp  
• Be clear about each role – What do I do differently?  
• Set initial targets to show the change is creating results  
• Do risk mitigation on 1st steps – Don’t force it on team  
• RACI chart, DMAIC Control Plan, Lean event action plan |
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<td>• Make the first steps clear, decisive, easy to understand</td>
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<td>• Be clear about each group’s role – What must I do differently?</td>
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<td>History of past Change successes</td>
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<td>• Communicate how this change worked in similar areas</td>
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<td>• Identify local champions of improvement &amp; change</td>
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Minimize Formula for Change Challenges

Minimizing challenges and unintended consequences for each component

\[ D_P * V_F * F_S * H_C > R_C \]

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| \( V_f \) | Vision of Future state                    | • Assure vision is believable, Future State VSM  
• Providing clear guidance for action plans and decision making or things will go astray  
• Get buy in; Address dissatisfaction areas in vision, but don’t be defensive |
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| $F_S$ or $S_E$ | First concrete Steps or Starting Effort to the future state | • Don’t need to know every step in the path forward, but provide assurance the leap is worth the risk - DMAIC Control Plan, Lean event action plan  
• Keep management engaged - Establish reviews to keep sponsor’s support, sustain the vision & align with business goals: KPI targets, RACI chart |
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| $F_s$ or $S_e$ | First concrete Steps or Starting Effort to the future state | • You don’t need to know every step in the path forward, but provide assurance the leap is worth the risk  
• Keep management engaged - Establish reviews to keep sponsor’s support, sustain the vision & align with business goals                                           |
| $H_c$  | History of past Change successes              | • Identify past unsuccessful changes & determine causes  
• Speak to status quo stakeholders about what they value  
• Remember 20%-60%-20% group acceptance guide                                                                                                                  |
Creating a Climate for Change is a Balance

Dissatisfaction with the present
Vision of the future
Starting effort
History of past changes

Resistance to the change

Build actions for these elements into a project’s error proofing, metrics and control plans

Change is about people & perception, resist being too tool oriented

Source: derived from Gleicher/Dannemiller formula
Final Thoughts – Do Not Over-Tool It

“Essentially all models are wrong; but some are useful” – George E. P. Box

“I try to assume that anchor draggers are good people with good intentions” – Jim Womack

“If the only tool you have is a hammer, you see every problem as a nail” – Abraham Maslow

Keep It Simple Stupid (KISS) – US Navy & Kelly Johnson, Lockheed
Gleicher-Dannemiller-Nestle Formula for Change

\[ \text{D}_P \ast \text{V}_F \ast \text{S}_E \ast \text{H}_C \geq \text{R}_C \]

Dissatisfaction with the Present
Vision of the Future
Starting Effort
History of past Changes
Resistance to the Change

Thank you