

Not ALL Change is Good: Recognize When & How to Champion Technology Innovation

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Introductions

Jeremiah Bowles

Customer Success Manager, Autodesk

- AEC Design Technologist
- Previously with Black & Veatch Engineering, ATG USA, SH Architecture, Cox Communications, owned LV Precision Panel – D.B. Custom Homes
- Technical Business Consultant for 3 years working with Medium to Large businesses adopt BIM technology solutions including Autodesk Map Guide, Revit Architecture, MEP & Structure, Navisworks, AutoCAD Structural Detailing, and Green Building Studio.
- Early academic work in Architectural Engineering, Current BIM, CM & PM
- BA Business Management, & BA work in Construction Management.
- Currently working on ME in Project Management at University of Kansas



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Introductions

W. Lance Kirby, Senior Business Consultant, Autodesk

- Previously with Perkins + Will and Rosser International: Projects in justice, commercial, education, sports, aviation and healthcare.
- Joined Revit Technologies in 2000, Autodesk in 2002. Helped develop Revit.
- Trained and mentored 1000's of architects and engineers in the use of BIM
- Consultancy customers include: AECOM, Balfour Beatty, Ballinger, BART, Brown and Caldwell, Burns and MacDonnell, Cannon Design, CDM Smith, CH2MHill, Corgan, DAR, DLR, Ellerbe Becket, EXP, Friedmutter, GE, Gensler, Gilbane, HDR, HKS, HOK, Jacobs, Kling Stubbins, Marriott, MWH, NBBJ, P+W, Petrobras, RTKL, SNC-Lavalin, Skanska, SOM, TVSA, Walmart, WSP, USACE, and URS
- B. Arch from Mississippi State U. & the Technical U. of Budapest



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Class summary

This course will help you to [gain executive sponsorship](#) and [identify and charter meaningful initiatives](#). You will also [discover](#) Building Information Modeling (BIM) and virtual design and construction (VDC) [initiatives](#) that [make](#) your company [money](#), [establish](#) the [business case for the change](#), develop success measurements for the change, establish which stakeholders can help [drive the change](#), as well as identify both the parties who will own the change and success measures that will [gain](#) high-level [commitment](#) to [win and succeed](#).

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Key learning objectives

At the end of this class, you will be able to:

- Learn to identify meaningful initiatives that influence company revenue
- Learn how to develop and champion enterprise technology innovation initiatives
- Understand the critical variables that help to better ensure successful execution
- Understand the change management framework and methodology

Schedule

- Intro: Diagnose before you subscribe – 3 min.
- Identifying the big rocks” – 25 min.
- Implementing the change – 20 min.
- Q&A – 7 min.

Diagnose Before You Subscribe!

| Identify | Description | Example |
|---------------------|--|---|
| PAIN | <ul style="list-style-type: none"> • What pain(s) are you facing, in which you consider your hack a potential or ideal solution? • Be as specific as you can. • Offer as much “use case” context as you care to paint an accurate picture | <ul style="list-style-type: none"> • “We’re thirsty” |
| WHO | <ul style="list-style-type: none"> • Who is having this pain, and when? | <ul style="list-style-type: none"> • Me, and my coworkers |
| WHY | <ul style="list-style-type: none"> • What are the underlying reasons for that pain? • Is it because...? | <ul style="list-style-type: none"> • No convenient source of liquid while I’m working • Water leaks out of my hands when I carry it with me |
| IMPACT | <ul style="list-style-type: none"> • What bad things happen because of that pain? • What is the impact to you, others in your organization, or other external project stakeholders? • Is this pain causing...? | <ul style="list-style-type: none"> • Can’t focus • Long breaks • Plummeting morale • Staff retention |
| VALUE | <ul style="list-style-type: none"> • What is the cost/monetary value to that pain? • How much, how many, how often does that pain occur? | <ul style="list-style-type: none"> • Water breaks extra 30 minutes per day, per each of 50 staff @ \$100/hr = \$650,000 year |
| CAPABILITIES | <ul style="list-style-type: none"> • What new capabilities do you envision? Why? • How will those capabilities mitigate the pain you identified? • If you were king for a day, how would you solve this problem? | <ul style="list-style-type: none"> • Transport water in cups and bottles • Drones carrying hoses • Immersive VR simulation of river to soothe and distract |

Identifying the Big Rocks

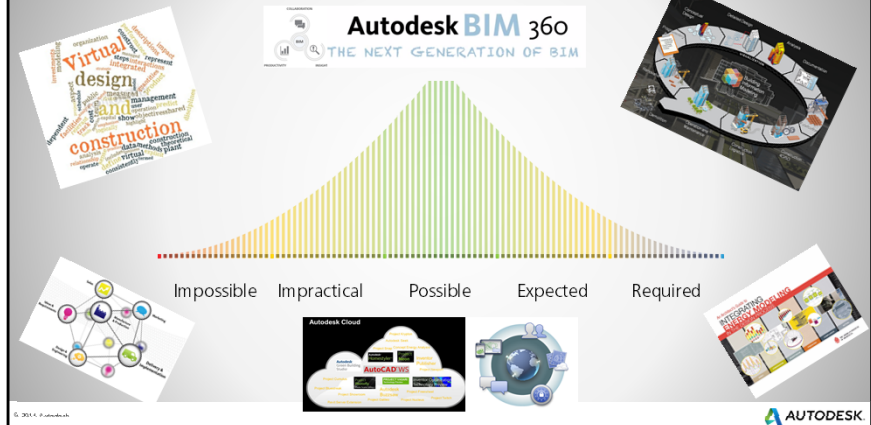
Innovation Continuum

Impossible Impractical Possible Expected Required

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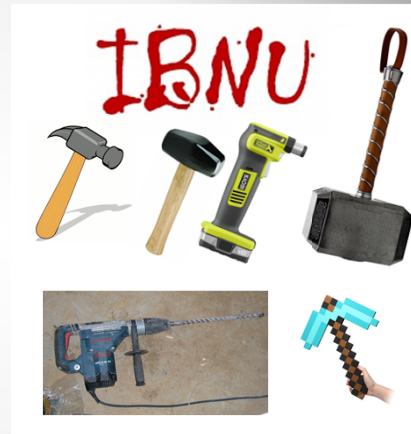
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Innovation Continuum



Innovation or Not

- Interesting but not Useful
- Too Much Sizzle, not enough Steak



Innovation!

Mindset
Skillset
Toolset



So what is innovation?

**“SOMETHING NEW OR DIFFERENT
SUCCESSFULLY BROUGHT INTO THE WORLD,
CREATING A SIGNIFICANT IMPACT”**

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Innovation Genome Project

| | |
|---------------------|--|
| LOOK | What could we look at in a new way, or from a new perspective? |
| USE | What could we use in a new way, or for the first time? |
| MOVE | What could we move , changing its position in time or space? |
| INTERCONNECT | What could we interconnect in a different way, or for the first time? |
| ALTER | What could we alter or change, in terms of design and performance? |
| MAKE | What could we make , creating something that is truly new? |
| IMAGINE | What could we imagine to create a great experience for someone? |

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Innovation Genome Project

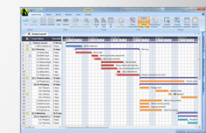
The Seven Phases of Making Innovation Real



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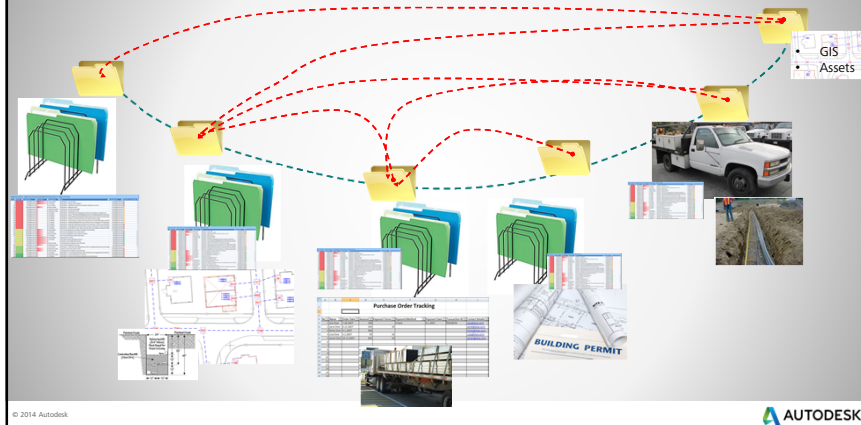
Long, long, ago in a galaxy far, far, away....



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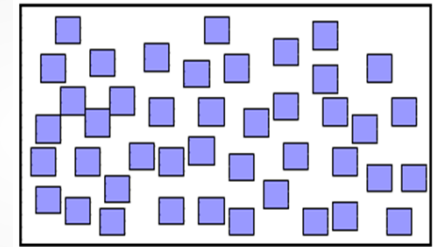
The business problem



The Business Challenge

Business Challenges

1. Copy and Tape
2. Lost files / projects
3. Multiple names / Analog assets
4. Project Adjacency (lost joint trench)
5. Planning / Design Silo's
6. As-built time to CAD 30 days
7. Analog tracking (fire-fighting)
8. Marketing map redraw



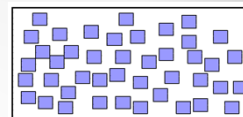
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The Business Challenge

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| | |
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Where to start? Tactical then Strategic

Get some quick wins! (Low hanging fruit)



Business Challenge

- Copy & Tape (Maps) for print.
- CAD team not perceived as valuable

Cost of Inaction (Value)

- 2-3 hours / per map
- Vanilla AutoCAD Software

Brilliant Description

- Map Meld request

Thought Experiment

- Software Demo / Proof of Concept
- Map request form -> Software Upgrade -> Map Query -> Increased CAD team Value -> new software / tools for CAD Department

Threat Assessment

- Not CAD responsibility
- CAD user resistance
- Limited Budgets

Boss Approval

- Established Business Case
- Protect – became my new responsibility

Iteration Improvement

- Quick win

Finalization Launch

- "Spread like a disease"

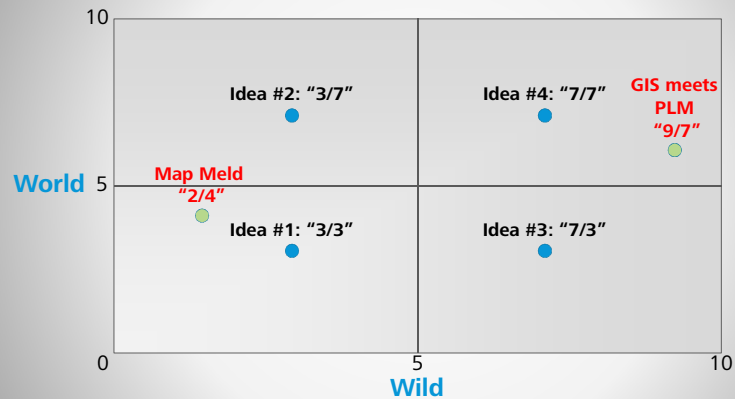
Ongoing Innovation

- Next steps

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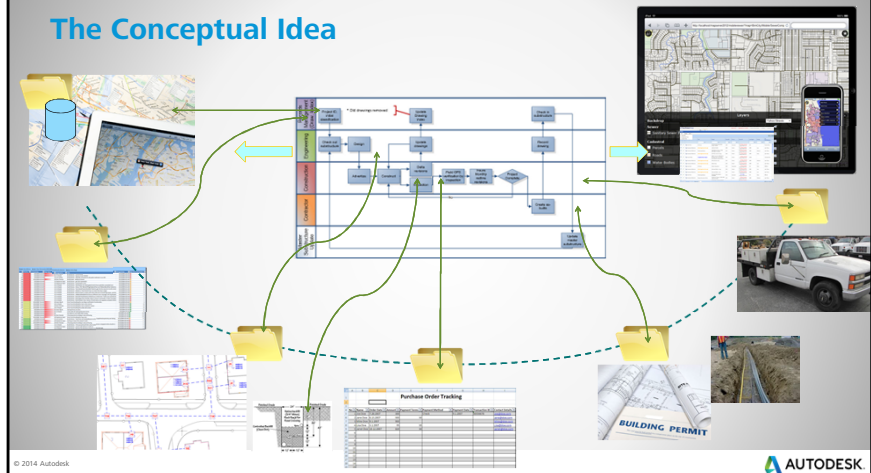
Wild / World Innovation Prioritizer



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The Conceptual Idea

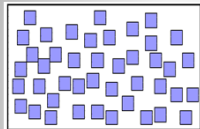


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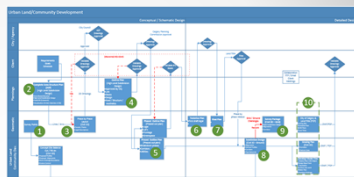
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Lessons learned Does it make an Impact?

Silent Brainstorm



Visio workflow with swim lanes



Value Cycle Time Analysis

| Value Cycle Time Analysis | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|----|
| Process Step | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Value - Added | | | | | | | | | | |
| Value - Enabled | X | | | | | | | | | |
| Non-Value Added | | | | | | | | | | |
| Total | | | | | | | | | | |

| Process Step | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|--------------|---|---|---|---|---|---|---|---|---|----|
| Wait Time | | | | | | | | | | |
| Work Time | | | | | | | | | | |
| Total Time | | | | | | | | | | |

| | |
|-----------------|----------------------------------|
| Value Added | Customer would pay for this step |
| Value Enabled | Creates value for the business |
| Non Value Added | Can be eliminated / automated |

| | |
|------------|--|
| Work Time | Average time to complete task |
| Wait Time | Avg. time waiting for another task until you can begin work again. |
| Total Time | Work time + Wait Time |

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Pareto's Optimal Allocation of Resources

- Vilfredo Pareto (1848-1923)
 - 80/20 rule
 - Law of the vital few (critical few variables)
- Examples:
 - 80% of sales comes from 20% of clients
- Sample Hypotheses
 - We can save money by eliminating First Class on international flights.
- Quick Sampling:
 - How many of us flew internationally to get here?
 - If you flew Internationally and you flew first class, share how much you paid? \$US Dollars (if you didn't fly first class multiply by 5)
 - If you flew domestic (States) share how much you paid for your flights.

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Pareto Findings

"We can save money by eliminating First Class on International flights."

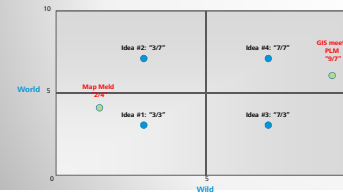
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Create a Brilliant Description

What is a brilliant description?

- Brilliant name for your concept.
- One Sentence
- One Paragraph
- One Page



"GIS MEETS PLM"
= LAME DESCRIPTION

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Thought Experiment

Thought Experiment by Bill O'Connor

- Inherently positive forward look
- Forward thinking
- Define the path moving forward

What does this look like?

- Definition of Success (CSF's)
 - What will this look like?
 - Is this Initiative Strategic?
 - Can it be broken down into several tactical pieces?
- Roadmap of the (Big Rocks)



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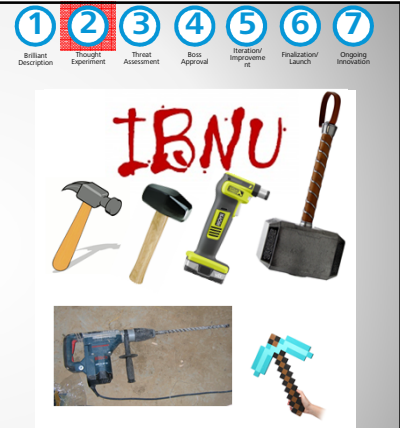
Thought Experiment

What Existed

- Autodesk Map Guide
- Redline tool
- Legend / theme filters (by project type)
- Add files at different steps (Asset collection)

Other Needed Capabilities

- Workflow driven processes
- Up to date maps
- Predetermined inputs
- User rights per workflow
- Anyone can update the maps
- Auto Naming conventions by asset type
- Place to store the documents captured



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Threat Assessment



Internal Cast of Characters:

- Competing Ideas
- Enamored by Tech Toys
- Competing Resources
- Too Much Change
- Slow to make a decision
- Timing

Gaps

- Boundary = Project lifecycle
- GIS department
- Project Funding
- Project Sponsor



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Boss Approval



Goal:

- Establish a Proof of Concept
- Get someone to go out on a limb
- Get some protection

Strategic

- Establish a Charter
- Assemble a guiding coalition
- Obtain funding

Power Sponsor



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Implementing the Change

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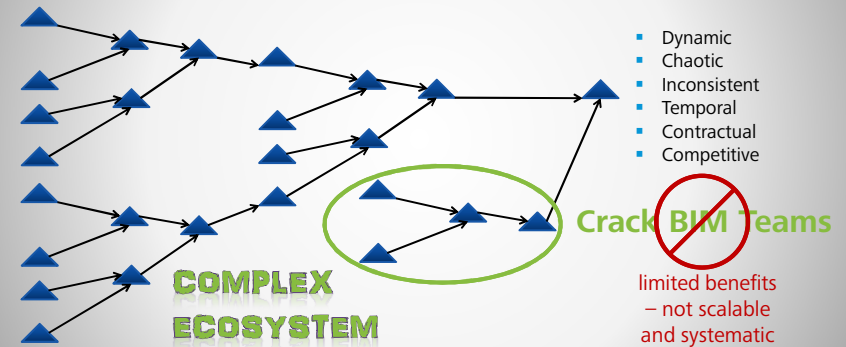
A Change Management Framework JP Kotter's 8-Step Change Model



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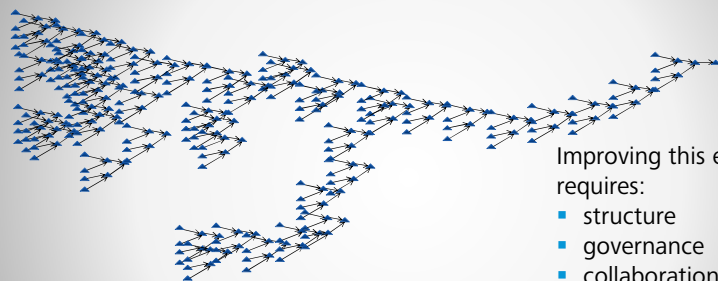
Why do we need an Organizational Change Management Framework?



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improving the ecosystem



Improving this ecosystem requires:

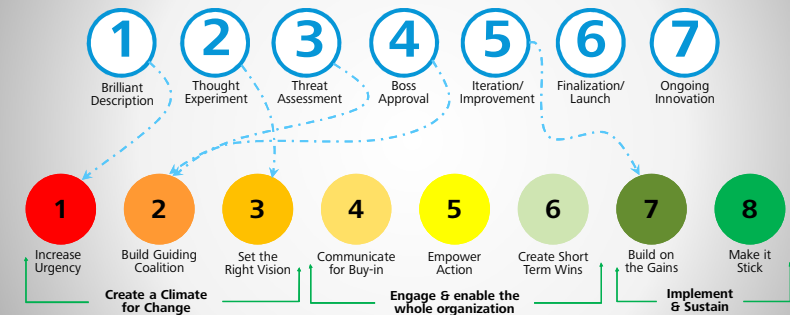
- structure
- governance
- collaboration
- support, and...
- change

Improving the ecosystem improves
the quality of the components

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A Change Management Framework is fed from the Innovation Steps



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Revise Brilliant Description to Increase Urgency!!!



Problem Statement

- When
- Why
- Magnitude
- Impact

PAIN

Solution Description

- How
- What
- Why



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Problem Statement Example:



Bad Problem Statement

- We need BIM to present models and create drawings in a new way.
- We need model based workflows were doing more projects this year.

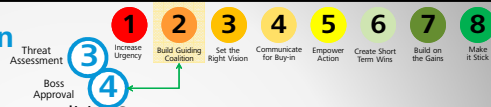
Good Problem Statement

- In 2014 (**when**) we developed 120 subdivisions phases. Each phase must be redrawn separately . . . taking 40 hours of rework with our current 2D drawing methods (**What**). This year we anticipate 240 phases (**Magnitude**). If we do not adopt model based workflows we will potentially lose **\$560,000** in profitability due to rework (**Impact**).

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Build Guiding Coalition



What is the Purpose of a guiding coalition?

- Keep change effort on target
- Help counter organizational resist stance.

Guiding Coalition Qualities!

- Skilled Professionals
- Credible
- Influential managers
- Leaders, strong business acumen
- Process owners



<http://managementadvisors.com/building-change-step-2-creating-the-guiding-coalition/>

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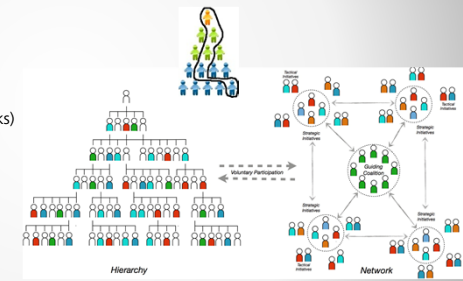
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Build Guiding Coalition



GC Characteristics

- Power Sponsor (CFO, COO, Chief Engineers)
- Sponsors – Process Owners (Responsible for change)
- Agents (Empowered by sponsor to carry out tasks)



<http://www.gibbllm.com/a-reading-from-the-gospel-of-kurtz/>

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Build Guiding Coalition

Lessons Learned

Where most go wrong:

- No established Charter (Authority)
- More than just technical team
- Power and influence
- Risk Adverse
- Culture
- Naysayers
- Rogue Agents
- Rabbit holes



Guiding Coalition = Process owners (owner or understand the process)

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Define a Change Vision

Initiative Charter

- Authority to act
- Include | Not include
- Vision
- Goals | Objectives
- Roadmap | Milestones
- Critical Success Factors



<http://www.pmi.org/learning/next-level-up-how-do-you-measure-project-success.aspx>

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Define a Change Vision

Define & Celebrate Success

Roadmap | Milestones

- High level activities
- Milestones
- Celebrate Success

Success Metrics

- Define success!
- Obstacles
- Opportunities | Benefits
- Objectives



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Communicate for Buy-in

Communication Plan

- Who, How, Frequency, Mode
- What to Communicate?
 - Summary of Key changes!
 - Key Message (WIIFM)
 - Benefits of the change (by stakeholder group)

Questions?

- What will drive each stakeholder to act?
- How will you communicate this?
- How you will they know it's successful?

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Communicate for Buy-in



- Project Timeline
 - To-be state
 - Proof of Concept results
 - Measured improvements
 - Adjustments | tweaks
- Modes of Communication
 - Workshops
 - Training / reinforcing
 - Motivating (Lunch n learns)
 - Communities of Practice

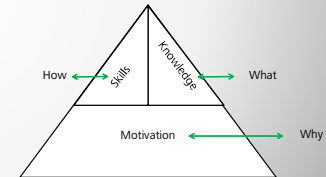
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Empower Action



- Establish a Shared Purpose
- Confront high-level resistors
- Provide experts / consultants
- Set short term objectives
- Provide transparency
- Encourage taking risks, different viewpoints, teamwork, collaboration
- Provide Training & Support
- Align Information Systems



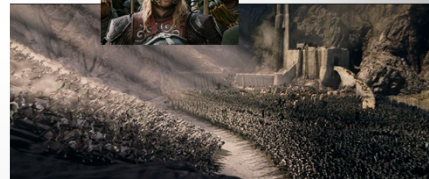
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Create Short Term Wins



Pilot Team



"PICK BATTLES THAT ARE BIG ENOUGH TO MATTER, AND SMALL ENOUGH TO WIN"

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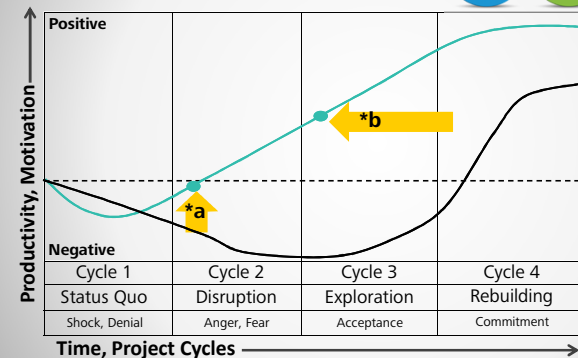
JONATHAN KOZEL

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Kubler Ross Change Curve



AUTODESK®
BUSINESS VALUE
METHODOLOGY



Managed Change with
Autodesk Consulting BVM

Typical adoption curve

*a Reduce negative
consequences.
*b Accelerating Change

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Create Short Term Wins

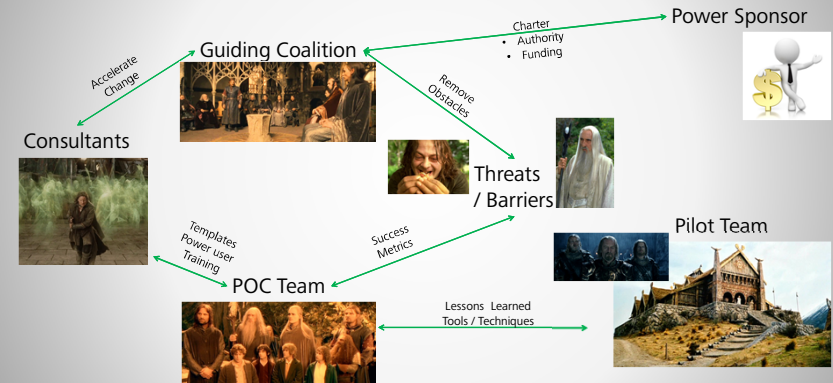


- Provide Further impetus for Change
- Conduct Lessons Learned (don't repeat mistakes)
 - What went right
 - What went wrong
 - What needs improvement
- Create difficulty for resisters to block change
- Provide evidence of success
 - Statistical means, Documented improvements / success
- Build momentum
 - Success stories

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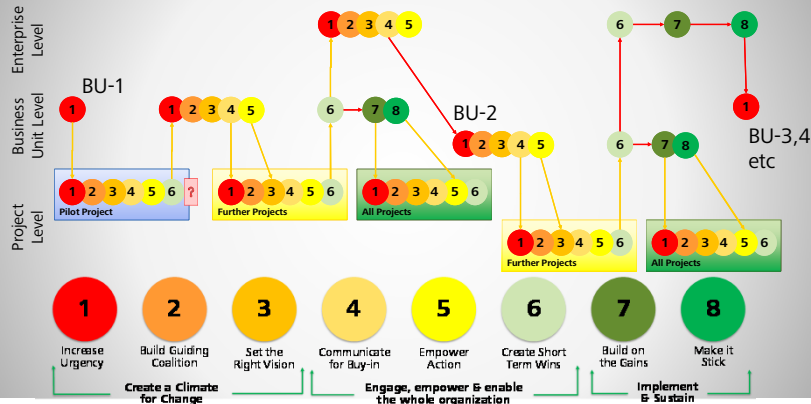
Overview



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Surfing the change steps at different organization levels



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Build on the Gains



- Acknowledge Hard work
- Celebrate success and Accomplishment
- Reaffirm vision
- Provide Tools and Training to reinforce new behaviors
- Remove legacy solutions
- Reward new behaviors
- Change culture
- Prepare people for the next change

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Questions?