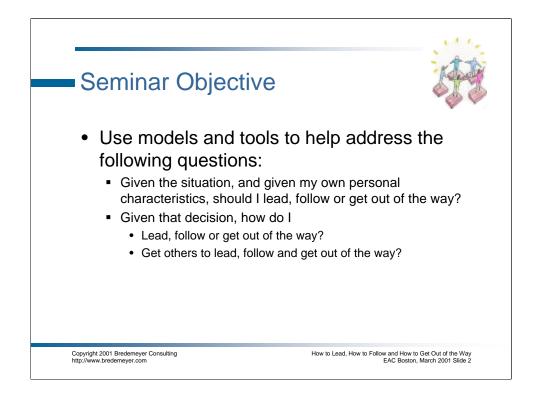


# Presented at the Enterprise Architectures Conference Boston, March 2001

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#### Background

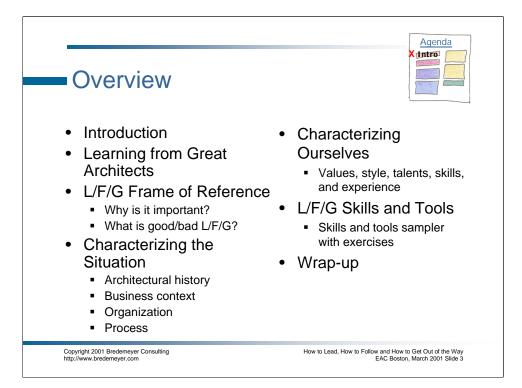
Having good technical skills and being able to articulate a good architecture is very important and the major focus of our work, but most architecting projects ultimately succeed or fail for people reasons.

#### **Creating a Perceptual Shift**

In this seminar, we consider the roles that are involved architecture programs, and what they can do to contribute to the success or failure of the architecture. In particular, we look at what it means to "lead, follow or get out of the way" (L/F/G), given our role and the current context of the architecture project. The objective is to create a shift in how we perceive our roles and provide models, tools and skills that will help make our architectures more successful. We will *exp*lore our values and *exp*and our perceptions, to sharpen, focus, enhance perception, choice, action and understanding.

#### Objectives

- Build awareness of the role you ought to be playing and the role you are actually playing.
- Build awareness of when, where and how you do lead and follow already at work, home, etc. Also, help you become more aware of the context, so that you can see when it is most appropriate to lead, follow or get out of the way.
- Help you answer:
- Am I having a negative/positive impact on a project?
- Is this a situation where I should lead or let go and let someone else lead?
- Is there a direct role for me to play? Or should I get out of the way (so I'm not trying to get my 2c in there when it isn't needed)?



#### **Skills and Tools Sampler**

Tools to enable L/F/G:

- creating an operating model, including
- decision responsibility matrix
- guiding principles
- charter
- creating a communication plan
- creating an ITA reference web site

Skills to enable L/F/G:

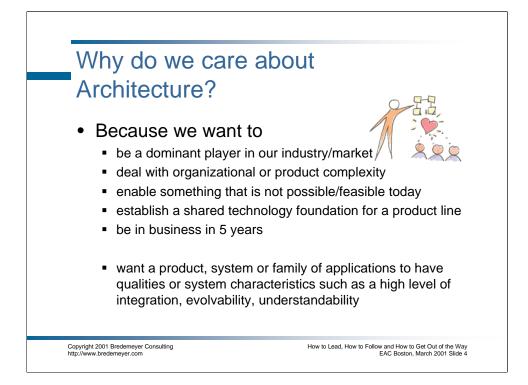
- relationship management skills
- building and maintaining rapport
- giving and receiving feedback

Leadership skills:

- creating a vision
- telling stories

Skills for Good Followers

communication game



#### **Good Architectures Enhance Productivity**

A good architecture:

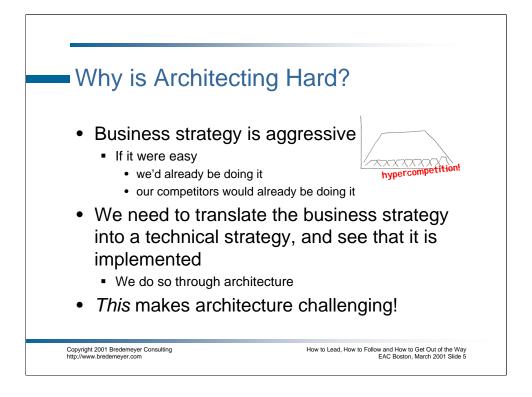
- allows components to be developed in parallel, by outside contractors, etc.
- ensures the components fit together (through standard interfaces and common mechanisms)
- is flexible, evolvable, adaptable (with replaceable components, localized changes, etc.)
- provides mechanisms for consistency, interoperability (through common services and infrastructure)

These features enhance productivity and allow the organization to focus on differentiation.

# Kinds of Situations We Are Talking About

We are addressing architectures of significance. A simple application architecture created by a small team for it's own use in development makes a contribution to that team, but tends not to be highly strategic to the company. We are dealing with architectures intended to be strategic, and which by their nature are more complex, both technically and organizationally. These may be:

- Architectures for a product family/line
- Architectures that span multiple organizations
- · Architectures that have a lot of uncertainty



# Examples of Why it is Hard

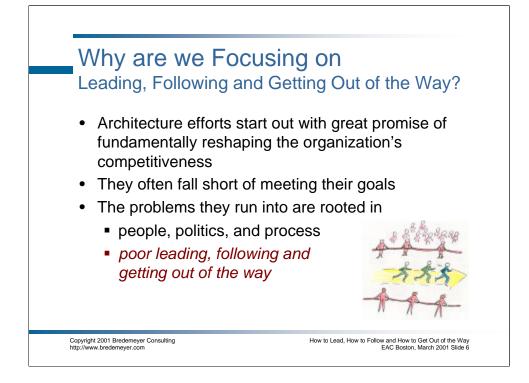
*Reuse across a product family:* Many organizations are adopting a business strategy of leveraging commonality across products to enhance productivity, thereby decreasing time-to-market and increasing responsiveness to customers. Everyone's done the "clone and go" approach (taking one product's code base and modifying it to fit the new customer base), and found that it quickly deteriorates into a nightmare of schedule slips and quality problems.

Now, the business strategy is translated into a product family (a.k.a. product line) architecture strategy, which is implemented as infrastructure and common components to be reused across the product family, and unique instantiations of products. Here, architecture is not simply the high-level decomposition of an application. The complexity goes way up, due to the widened scope of the problem:

• the *technical complexity* is compounded by having to accommodate the commonality across the products as well as the uniqueness in each product.

• the organizational complexity is compounded because there are greater dependencies across the organization for requirements input and prioritization, and a more diverse set of schedule-driven product developers who can derail the architecture by ignoring it, challenging it, not following it through lack of understanding, etc.

*Improving Consistency and Integration Across Applications*: Similarly, this objective introduces greater dependencies, for now the application groups are dependent on the architecture team and their schedules. There is also likely to be strong resistance to the loss of independence.

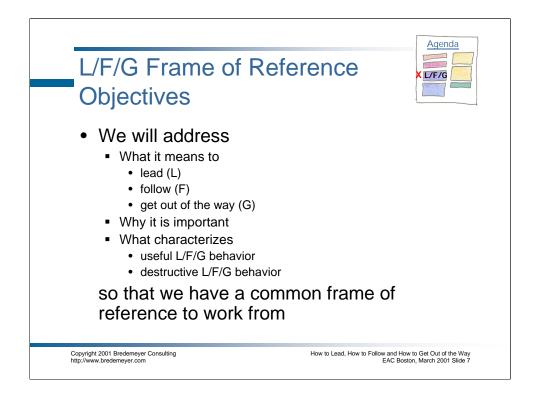


#### Examples of Poor Leading, Following and Getting Out of the Way

Lack of Leadership: Architecture teams that have no (recognized) leader, typically flounder without direction. In consensus-oriented organizational cultures, there is often resistance to leadership. Managers resist appointing someone to lead, leaders do not step forward, and team-members do not accept leadership if it does emerge. Even when such teams are urged to name a leader, they resist in subtle ways. One team elected as leader the person least likely to lead. That person was the most adept at facilitating the group, reducing confrontations and appeasing team members when they did arise. But the team never made any of the tough decisions it was faced with, and eventually was dissolved.

*Poor Following*: Architecture teams are pulled in too many directions at once when everyone on the team tries to dominate, each regarding their own agenda as foremost. Meetings are fractious, with endless "discussion:"

"DISCUSSION, n. A method of confirming others in their errors." Ambrose Bierce, *The Devil's Dictionary* 

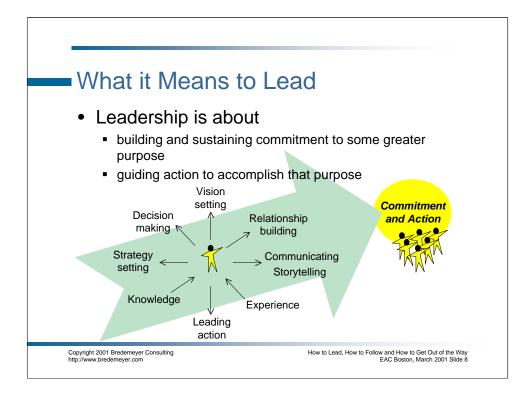


# L/F/G Frame of Reference Section Overview

We will introduce some models for thinking about the importance of leading, following and getting out of the way, as appropriate to one's role and process context. Using group graphics to enhance participation, we will work on identifying behaviors associated with good versus bad leading, following and getting out of the way.

#### Objective:

- Create a perceptual shift in how we think about architecture projects and our role in making them succeed or fail
- We want to provide images, metaphors, and ways of thinking about LFG, so that we are all more resourceful and able to make a greater contribution to the architecture project.



#### Leadership

Leadership entails:

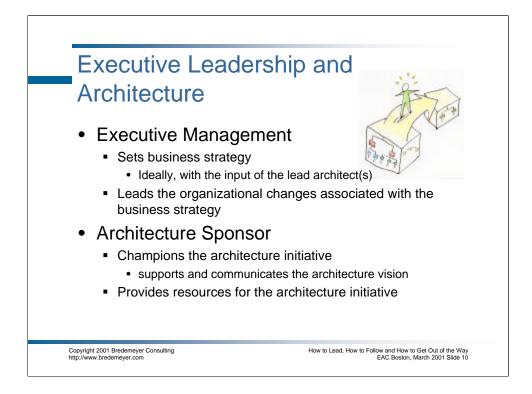
- vision setting: articulating the greater purpose
- relationship building
- strategy setting: how to attain that purpose
- communicating, including story telling
- knowledge and experience (must be credible)



#### Leadership versus Management

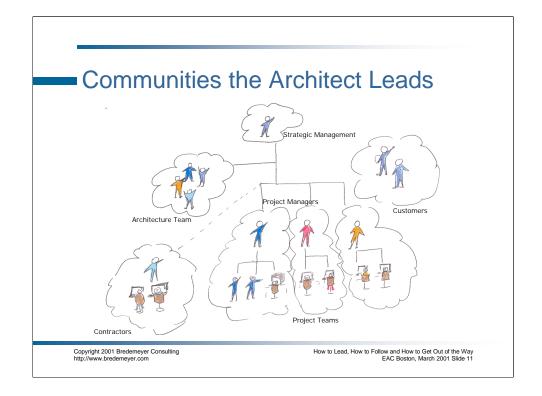
If the problem is routine, good managers are needed to facilitate the work that needs to be done, efficiently applying resources and getting results. For problems that require change, where there is lack of acceptance, or novelty, leadership is essential. Inspired vision, passion, and a willingness to take decisive action in the face of uncertainty, are the hallmarks of leaders. Architecture projects are, by their very nature, ventures into unchartered territory and especially fraught with competing ideas on which direction to take. Without leadership, indecision reigns:

"INDECISION, n. The chief element of success; "for whereas," saith Sir Thomas Brewold, "there is but one way to do nothing and divers ways to do something, whereof, to a surety, only one is the right way, it followeth that he who from indecision standeth still hath not so many chances of going astray as he who pusheth forwards..." Ambrose Bierce, *The Devil's Dictionary* 



# Sponsorship

Sponsorship reinforces the importance of the work, protects the architecture team from interference, opens up opportunities, provides resources and removes obstacles. It is important that the sponsor demonstrate sustained commitment to the architecture effort and acts as a role model (e.g., not publicly challenging the architecture or the architect's decisions, advocating the vision and architectural strategy, etc.).



Community	What the Architect Does
Strategic management	<ul><li>Influences business strategy</li><li>Sets technology strategy</li></ul>
Project management	<ul> <li>Influences project plans</li> </ul>
Project teams (now and in future)	<ul><li>Guides designs</li><li>Certifies implementations</li></ul>
Contractors and suppliers	<ul><li>Guides designs</li><li>Certifies implementations</li></ul>
Customers	<ul><li>Influences product choices</li><li>Determines product value</li></ul>



# Leadership and Organizational Support

You've probably heard the quote "If you look behind and no-one is following, you are not leading." This puts the onus completely on the leader and is not completely fair. Some organizational cultures just don't support leaders--or, conversely, following. They aren't willing to make one person the leader. Take for example this situation: "One of our most severe problems... came from a team of 70 people that had two chief architects. These two architects did not share the same vision for the architecture or the product. You can imagine what resulted. Eventually the project was cancelled. The team produced nothing." (p. 47 Dikel et. al., 2001).



#### **Example of Following**

One architecture team had three of the most senior, most talented architects at HP. They knew that to be successful, all three could not try to lead. This would cause too much division in the team. They appointed a leader, and as Joe Sventek puts it, they let him be a "benevolent dictator with a baseball bat". That is, they allowed him to set direction, make difficult decisions to break logjams, and generally lead the team. This does not mean that they were not active in debates about how to solve the challenges of the architecture, but rather that they allowed the lead architect to make choices between alternatives when there was no consensus.

# **Compromises Have to be Made**

It is just as well to remember that:

"the practice of architecture is a long and rapid succession of sub-optimal decisions, mostly made in partial light." Philippe Kruchten, 1999

and

"Good enough for each part is usually best for the whole system. When one part is maximized then there are inevitable losses for other parts." (Principles of Systems Thinking, http://www.lambent.com/systems/sysprin.htm)

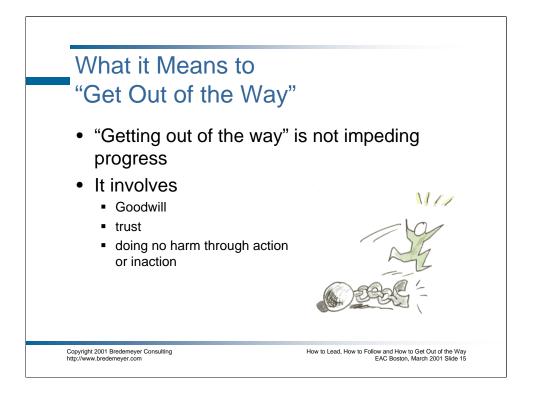
# Some Images of Following

- US military versus Russian military
- Climbing
- Professor/student; craftsman/apprentice
- Lemmings!



# **Collaboration is Key to Team Success**

The architecture team needs to operate as a *team*: "a small number of people with complementary skills who are committed to a common purpose, performance goals, and approach for which they hold themselves mutually accountable" (Katzenbach and Smith, 1993)



#### Images of Getting Out of the Way

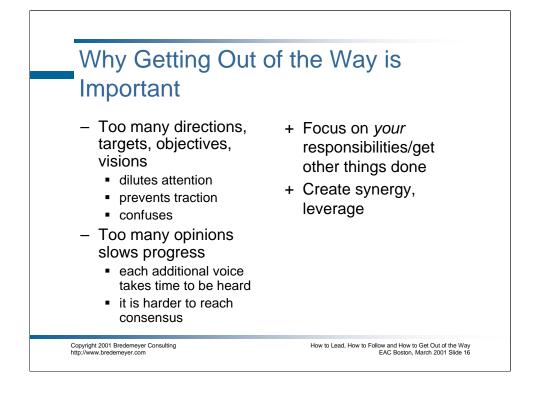
Aikido

#### Images of Not Getting Out of the Way

- Sears automotive
- % of injury/sickness is inflicted by the medical profession
- Cow on the train tracks (bad for the cow)
- Truck on the train tracks (bad for the truck and the train)
- Boulder on the train tracks (bad for the train)

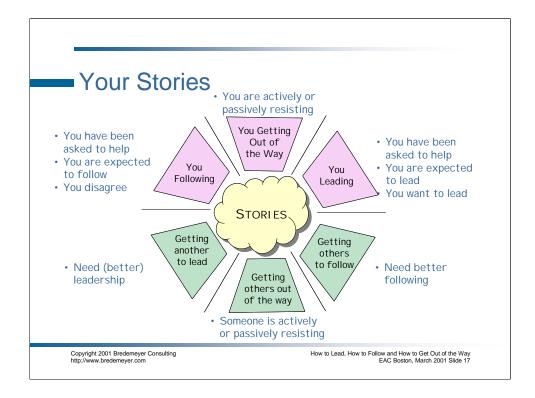
#### What it Does Not Mean

This is not to say that there aren't times where it is appropriate to raise concerns and question approaches. It does mean that when you do, it should not be destructive. Indeed, there are times in the architecture lifecycle when the whole architecture initiative should be scrutinized for alignment with business need and viability. Also, for any architectural decision, there should be a decision process that takes input and provides opportunity for review and raising concerns. During the expansion/creative phase, it is healthy to have different views, and play devil's advocate. However, there (quickly) comes a time when it is just as important to reach consensus. Once decisions are made, good following means that they are accepted (even if viewed as locally sub-optimal) and supported.



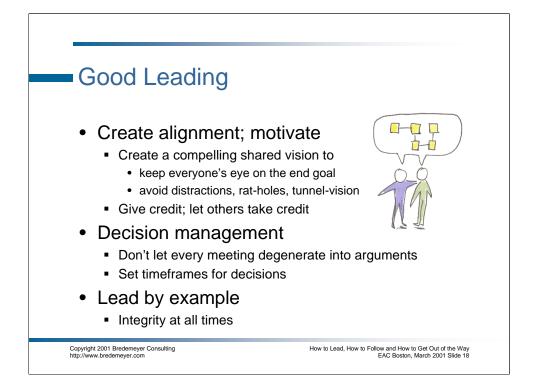
#### Images of Getting Someone Out of the Way

- Football blocker
- Rhode Island embargo



#### Write Your Story

In this exercise, think of 3 situations where there was a need for leadership, following, and getting out of the way. It may be that in the situation *you* needed to lead, follow, or get out of the way, or that you needed to *get someone else* to do so (see model above). You may have done well in the situation you describe, but it is just as useful to think of cases where you could have done better.



#### **Other Good Leadership Behaviors**

**Give Credit: Let others defend the architecture.** Let someone else respond to technical concerns rather than always appearing to be the sole source of knowledge and expertise. This reinforces teamwork, provides the architect insights from people who agree as well as those who disagree, etc. Malveau and Mowbray, *Software Architect Bootcamp*, 2001

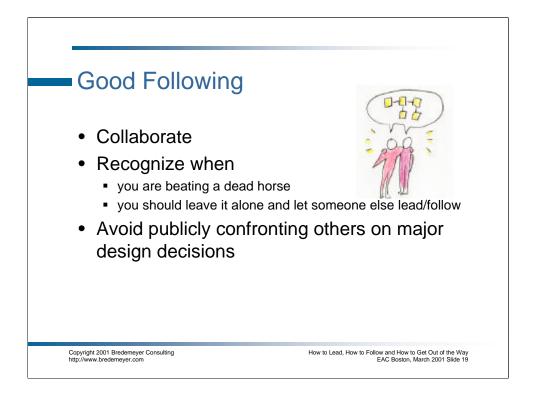
**Motivate by Delegating.** Build motivation by delegating ownership for tasks/decisions to others; don't try to do everything yourself. Trust those you delegate to, and don't micromanage.

**Share Knowledge/Act as a Mentor.** Freely share knowledge; act as a mentor; make your reasoning clear so others can learn from the heuristics and experience you bring to bear.

**Lead by Example.** Lead by stepping out of the limelight and demonstrating good following behaviors whenever it is appropriate for someone else to be leading--be a leader of leaders.

**Decision Management.** When an issue arises, add it to the issues list with an owner and due date. Create a sub-team to get/verify the relevant information and propose a resolution. Set up a meeting time specifically to address the proposal, or, if immediate action is required, make the decision and explain why time constraints force you to lay down the law and move on.

**Identify Other Good Leading Behaviors** 



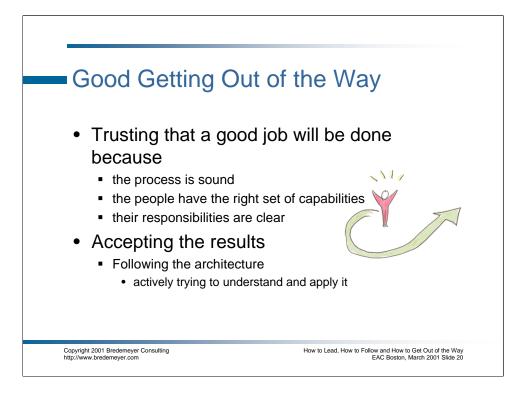
#### **Identify Other Good Following Behaviors**

- Understand how proposals were arrived at
- Practice advocating others ideas



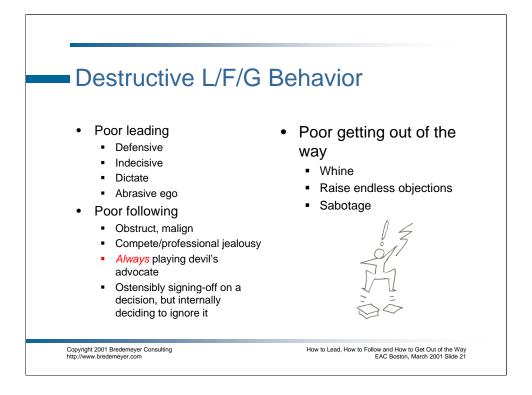
#### Conflict

Remember that teams typically move through the 4 stages of: *Forming, Storming, Norming and Performing*. Good "following" does not mean that differences of opinion should be stifled. Encourage constructive and non-judgmental airing of differences. View them as opportunities to learn, provoking new perspectives on the issue. Keep the framing positive to build rather than destroy mutual respect in the team.



Identify Other Good Getting Out of the Way Behaviors





#### Identify Destructive L/F/G Behaviors



**Poor Getting Out of the Way Example:** Saying to someone who has put a lot of work into something but it doesn't meet your expectations: "We'll just throw it away..."

#### Note on Professional Jealousy

"Professional jealousy is a factor that you will have to watch for vigilantly. You must learn to conduct yourself with a certain degree of humility and be prepared to defend yourself when necessary. Never take any comment personally; it's always a mistake." Malveau and Mowbray, *Software Architect Bootcamp*, 2001