SHAPING AND COMMUNICATING ARCHITECTURE

SETH DOBBS
@sethdtech
https://www.linkedin.com/in/seth-dobbs/
October 31, 2018
ARCHITECTS ARE LEADERS

• Architects are more than just technical experts
• We translate between business and technology
• We advise our businesses and guide our teams
• Effective communication is more than just a soft skill, it’s essential
Our great ideas don’t matter if we can’t get others on board.
COMMUNICATION

The imparting or interchange of thoughts, opinions, or information.

Dictionary.com
COMMUNICATION

The **imparting** or interchange of thoughts, opinions, or information.

Dictionary.com
The greatest enemy of communication is the illusion of it.

PIERRE MARTINEAU
THE ILLUSION OF COMMUNICATION

Occurs when we don’t perceive a disconnect even though there is one.
THE ILLUSION OF COMMUNICATION

“I told them that”

“It’s on the wiki”

“They were in the room”

“It was in an email”

“It’s in the code”
THE ILLUSION OF COMMUNICATION

“I told them that”

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Other Illusions?
Communication is a two-way street, but we own being understood.
GOALS

1. Understand the different stakeholders with which we communicate and what they need to know
2. Understand the process for shaping and communicating solutions
3. Learn about conflict management and communication antipatterns
We sell our solutions internally and externally
Sales is the process of helping clients succeed in a way they feel good about.

"LET’S GET REAL OR LET’S NOT PLAY" KHalsa, ILLIG
Architecture is the process of helping our business succeed in a way that makes them feel confident.
WHY TALK ABOUT SALES?

Various stakeholders need to buy in to our solutions
WHY TALK ABOUT SALES?

A good salesperson seeks first to understand
WHY TALK ABOUT SALES?

A good sales process starts with the end in mind
WHY TALK ABOUT SALES?

Sales is about listening and understanding
WHY TALK ABOUT SALES?

All decisions are emotional
WHAT IS SALES?

- Commonly associated with a person doing something to people rather than for or with them
- Selling is a conversation
- Understanding and meeting needs
- Focus first on making stakeholders successful, not ourselves
WHAT IS BUYING?

A decision that the perceived value is worth the perceived cost.
STAKEHOLDERS
An architect interacts with numerous stakeholders.

There are people that we influence, advise, and/or direct.

There are people that influence us, advise us, and/or direct us.

Challenge to navigate.
Who are our stakeholders?
STAKEHOLDERS

1. Developers
2. Project Managers
3. Designers
4. Business Leads
OUR STAKEHOLDERS

• Provide input
• Need to understand
• Have needs and goals
• Can cause friction
DEVELOPERS
STAKEHOLDER: DEVELOPER

Provides:

- Knowledge of existing implementation
- Deeper hands on language/platform knowledge
- Sounding board
- Technical constraints
Needs to Know:

- How are we building this?
- Why did we make these choices?
- What were the assumptions/constraints?
STAKEHOLDER: DEVELOPER

Needs/Goals:

• Ease of development (and meeting timelines)
• Feeling like part of the solution (esp. senior)
• Understanding of direction
• Independence
STAKEHOLDER: DEVELOPER

Friction:

• Passive-aggressive resistance
• Ongoing skepticism
PROJECT MANAGERS
STAKEHOLDER: PROJECT MANAGER

Provides:

• Budgetary and timeline constraints
• Client / business knowledge
• Overall project goals
STAKEHOLDER: PROJECT MANAGER

Needs to Know:

• How are we building this (high-level view)?
• Impact on time/scope/cost
• Ramifications of future time/scope/cost that might make client change direction
STAKEHOLDER: PROJECT MANAGER

Needs/Goals:

- Assurance that solution meets constraints
- Ability to communicate clearly to business, particularly if there’s variance
- Team on same page
STAKEHOLDER: PROJECT MANAGER

Friction:

• “Not enough time for meetings”
• Armchair solutioning
• Lack of support (if needs aren’t met)
DESIGNERS
STAKEHOLDER: DESIGNERS

Provides:

• User point of view
• Usability requirements
• Long term vision / what could be
• Customer journey and intangibles
STAKEHOLDER: DESIGNERS

Needs to Know:

• How engineering can enable experience
• Constraints on design / experience (and what’s firm / what’s flexible)
• Tradeoffs
STAKEHOLDER: DESIGNERS

Needs/Goals:

• Best on-brand experience
• Understanding what’s feasible
STAKEHOLDER: DESIGNERS

Friction:

- Different value in trading off experience for ease of development
- Client / business already approved
CLIENT / BUSINESS
STAKEHOLDER: CLIENT / BUSINESS

Provides:

• Business direction & goals
• Prioritization
• Vision
• Budget
STAKEHOLDER: CLIENT / BUSINESS

Needs to Know:

• How does this help meet short- and long-term business objectives?
• Are there tradeoffs on time/cost/scope that might make them change direction?
STAKEHOLDER: CLIENT / BUSINESS

Needs/Goals:

- Meeting business goals
- Seen as successful in their organization
- Justification for costs
- Confidence in team
STAKEHOLDER: CLIENT / BUSINESS

Friction:

• “I’ve heard that ____ is a great technology, why don’t we use that?”
• Misalignment
DISCUSS

Have you run into challenging scenarios with respect to stakeholders?
SELLING

Getting from problem to solution
The only way to influence someone is to find out what they want and show them how to get it.

DALE CARNEGIE
SHAPING AND COMMUNICATING A SOLUTION

1. Research
2. Qualify
3. Solve
4. Present (Close)
RESEARCH
Communication skills:

- Listening
- Inquiry
Understand stakeholders and their needs
Inquiry vs. advocacy
Listen to understand, not to interrupt
Set yourself up to start with the end in mind
Find the actual problem statement
PROBLEM STATEMENT

Our solutions are valuable only if our business / clients / users see them as solving meaningful problems
BUSINESS PROBLEM OR TECHNICAL PROBLEM?

The customer profile queries are slow.
BUSINESS PROBLEM OR TECHNICAL PROBLEM?

Our users have to wait so long to view their profile that they leave the site and don’t come back.
BUSINESS PROBLEM OR TECHNICAL PROBLEM?

The servers cannot support high throughput.
BUSINESS PROBLEM OR TECHNICAL PROBLEM?

If more than __ users come to the site, performance will degrade to the point that it will seem the system is down.
QUALIFY
Communication skills:

- Dialogue
Validate:

- Assumptions
- Constraints
- Priorities
Define and communicate principles that will drive architecture / solution
Confirm understanding of stakeholder hot buttons - groundwork for getting buy in
Build trust by demonstrating listening skills, understanding of needs
Verify key assumptions and constraints before diving into solution
Communication is a two-way street, but we own understanding what we’ve heard.
Read back your understanding
READBACK - MAKE SURE YOU HAVE UNDERSTOOD

When listening, verify that you've understood what you've heard

• "What I hear you saying is..."
• "OK, so my understanding is..."
• "To summarize, you want to do 3 things..."
Don’t be afraid to be wrong!
Questions are a sign of strength
Ask questions to help guide:

• Others to understanding you
• Yourself to understanding others
Ask questions to **disprove** your theory
CLARITY AND CONFLICT

- Qualify to pave way to solution in a way that is clear to everyone
- Most conflicts are related to disagreement on assumptions and constraints
DISCUSS

What kind of disproving questions should you ask in your current work?
BREAK
SOLVE
SOLVING

- Important to hold off committing to solutions too early in the process
- Doesn’t mean we shouldn’t be thinking about solutions
Control need for instant gratification in solving
Ok to solve in your head, but use that to ask disproving questions, not questions to enforce confirmation bias
However...avoid analysis paralysis
“A problem well stated is a problem half solved”
IS THIS A PROBLEM STATEMENT?

“We need SEO optimization”

NOT A PROBLEM STATEMENT
“We need to generate more online leads”

MAYBE A PROBLEM STATEMENT
“We aren’t closing enough new business”

GOOD PROBLEM STATEMENT
STEP 2: HYPOTHESIS

- Sometimes you can provide a hypothesis as a strawman or direction to guide thinking
  - “Using queues will give us the capability to recover from network failures”
- Team should ask disproving questions to test hypothesis
EXAMPLE HYPOTHESIS

“We need an architecture that enables offline tablet usage but can get content updates when wifi is available”
STEP 3: HYPOTHESIS -> SOLUTION

- Hypothesis serves as framework to solution
- Ask disproving questions
- Ensure it encompasses all assumptions, constraints, etc.
Solving is mapping from needs/goals to solution while honoring constraints
PRESENT
OUTCOME OF PRESENTING / CLOSING

- Obtaining buy-in from your stakeholders
- Clarity and forward momentum for team
FRAMEWORK FOR PRESENTING

1. Problem Statement
   - Restate problem statement
   - Validate once again that we are solving the right thing
2. Background

- Start with restating assumptions, goals, constraints, context
- Walk people into your solution
- Pave the way with understanding of needs
3. State Hypothesis and Value

- High level approach
- Show how you are addressing constraints, needs
- Map to business value
- Example: “Background synchronization will allow us to get updates when wifi is available while the local cache will ensure offline operation.”
- Example: “Cloud deployment will enable us to flex high during peak demand without having to cover cost of additional compute when unused.”
4. Provide Solution Details
   • Tailored to audience
   • Continue to map details to values, needs, constraints
TIPS FOR PRESENTING

• Advocacy - appear confident (but remain receptive)
• Multiple communications
OTHER PRESENTING TECHNIQUES
STORYTELLING

• Understand the conclusion of your story - what do you want the listeners to get out of listening to you
• Walk them through the arc from beginning to end
• Provides cohesion, reasons for listening
• Sets people up to predict ending which can often garner support
Don’t just jump to paragraph 5

The homeowner, who will get a message telling them when their packages have arrived, can view the delivery - from the time the driver enters, until they walk back out the door, - through the August Home app. They’ll even be notified that the front door has been locked once the driver takes off.

NEWSPAPER APPROACH

Start with a headline - what are you talking about?

“There are 3 business problems addressed by NoSQL”
“NoSQL will help us address x, y, and z”
Body paragraphs: spiral down into the details, reinforce message

“The first problem, x, will be addressed by…”
NEWSPAPER APPROACH

- Builds a framework for the listener to absorb complex information
- Gives listeners ability to pick and steer for what they need
TEACHING METHOD

• Tell people what you’re going to teach them
• Teach them
• Tell them what you taught them
• Wrap up with relevant story / example
When speaking, verify that listeners have understood

- "What were the 3 key reasons for choosing..."
- "Can you summarize next steps..."
- "What didn't make sense?"
CONFLICT
Two kinds of conflict:

• Conflict of ideas (good)

• Conflict of people (bad)
Good team members will question what they don’t understand.

Bad team members will not ask questions, question everything, or question to filibuster.
“THE DETAIL”

- An obscure but “important” detail that can shoot down ideas
- Roadblockers can use esoteric knowledge to thwart progress
- Sometimes we have visibility to too many details and can make the honest mistake of giving equal weight to details
- Don’t prioritize minutiae at the expense of a good solution
Typically not about the **solution** but about the **problem** we’re trying to solve.
CONFLICT

Inquiry vs. Advocacy
Address conflict by starting with motivation

“\textit{I'm trying to better understand your concerns}”
CONFLICT

Ask questions to guide rather than confront
CONFLICT

Responding > reacting
Use “5 whys” to get to root of problem
Sometimes we’re wrong

“All of us are smarter than any of us” – Tim Brown
COMMUNICATION ANTIPATTERNS
COMMUNICATION ANTIPATTERNS

“Because I said so...”  "I'm really busy"

"As I've said before..."

"I told them"

"I know that"

"That's just common sense"
COMMUNICATION STYLES

DISC
DISC OVERVIEW

**Dominant / Direct**

**Influence / Inspire**

**Conscientious / Cautious**

**Steady / Supportive**
# Disc and Architect Tendencies

<table>
<thead>
<tr>
<th>Controlling / Micromanaging (D, C)</th>
<th>Laissez-Faire / Distant (I, S)</th>
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<tbody>
<tr>
<td>Rejects suggestions that aren't theirs</td>
<td>Too vague</td>
</tr>
<tr>
<td>Won’t want to admit to being wrong</td>
<td>Not hands-on enough</td>
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<tr>
<td>Too deep in implementation details</td>
<td>Can appear in over their head / distant</td>
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<tr>
<td>Can’t let go - controls development efforts</td>
<td>Lets bad decisions run rather than confront</td>
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<tr>
<td>Appears impatient</td>
<td>Moves on too soon</td>
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<tr>
<td>It’s about the architect, not the solution</td>
<td>Assumes good intentions are enough</td>
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</table>
## DISC AND ARCHITECT TENDENCIES

<table>
<thead>
<tr>
<th>Jumps to Solution (D, I)</th>
<th>Analysis Paralysis (S, C)</th>
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</thead>
<tbody>
<tr>
<td>Quick thinking – sometimes reactive</td>
<td>Too deep into weeds</td>
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<tr>
<td>Not into the details</td>
<td>Needs all info to make a decision</td>
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<td>Too eager for a flash of brilliance</td>
<td>Disrupting status quo requires work</td>
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EFFECTIVE ARCHITECTS
Provide decisions and guidance to help dev teams make good choices
Ensure team has what they need to succeed
Display emotional intelligence:
Responding > reacting
Doesn’t assault other ideas - engages
Walks back to assumptions, constraints, expected outcomes
FINAL THOUGHTS
“Words have meaning!”
“Words have lots of meanings!”
WRAP UP

Communication is a two-way street, but we own both understanding and being understood.
WHAT WE DISCUSSED

1. The illusion of communication
2. Stakeholder ecosystem
3. Why we think about selling
4. A process for shaping, solving, and communicating
THANK YOU!

Seth Dobbs
@sethdtech
https://www.linkedin.com/in/seth-dobbs/