SHAPING AND COMMUNICATING ARCHITECTURE

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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 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
COMMUNICATION PURPOSE

In the context of our work, communication has a purpose, a desired outcome.

Success or failure of communication is measured not by sound waves or words on a page but by the realization of those outcomes.
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”

“They were in the room”

“It’s on the wiki”

“It was in an email”

“It’s in the code”
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”
"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
SELLING

We sell our solutions internally and externally
“Let’s Get Real Or Let’s Not Play”
Khalsa, Illig

Sales is the process of helping clients succeed in a way they feel good about.
Architecture is the process of helping our business succeed in a way that makes them feel confident.

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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*
SUMMARY: 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

Understanding our ecosystem
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.
OUR STAKEHOLDERS

- Provide input
- Need to understand
- Have needs and goals
- Can cause friction
1. Developers
2. Project Managers
3. Designers
4. Business Leadership
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)
OTHER THOUGHTS ON PROJECT MANAGERS?
DESIGNERS
STAKEHOLDER: DESIGNER

Provides:

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

Needs to Know:

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

Needs/Goals:

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

Friction:

• Different value in trading off experience for ease of development
• Client / business already approved
BUSINESS LEADERSHIP
STAKEHOLDER: BUSINESS LEAD

Provides:

• Business direction & goals
• Prioritization
• Vision
• Budget
STAKEHOLDER: BUSINESS LEAD

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: BUSINESS LEAD

Needs/Goals:

• Meeting business goals
• Seen as successful in their organization
• Justification for costs
• Confidence in team
STAKEHOLDER: BUSINESS LEAD

Friction:

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

What other stakeholders do you work with?

What challenges have you had with 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
THE PROCESS

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

Identifying the problem
RESEARCH

Communication skills:

• Listening
• Inquiry
Understand stakeholders and their needs
RESEARCH

Inquiry vs. Advocacy
Listen to understand, not to interrupt
RESEARCH

Set yourself up to start with the end in mind
Find the actual 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

Validate our understanding of the problem and impact of solving
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.
ACHIEVE CLARITY – THE POWER OF ASKING

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!
ACHIEVE CLARITY – THE POWER OF ASKING

Questions are a sign of strength
ACHIEVE CLARITY – THE POWER OF ASKING

Ask questions to help guide:

• Others to understanding you
• Yourself to understanding others
Avoid confirmation bias
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
Q&A

Questions on what we’ve covered so far?
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 solving gratification
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
IS THIS A PROBLEM STATEMENT?

“We need to generate more online leads”

MAYBE A PROBLEM STATEMENT
IS THIS A PROBLEM STATEMENT?

“We aren’t closing enough new business”

BETTER PROBLEM STATEMENT
REPHRASE THESE AS BUSINESS PROBLEMS

- The catalog tables are poorly designed
- Server upgrades / buying more servers
- Code needing refactoring
- Library upgrades
- Bugs
BUSINESS VALUE

Translate to business problems (preventing / sub-optimizing goals)

- People trying to ... will have a bad experience and not come back
- Browsing a catalog is so slow people will leave the site
- Users are unable to ...
- When we scale to ... users we won’t be able to support them
- Mobile users will not be able to find products
- The cost of adding a new feature will be prohibitive or take too long to be of value
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
“We need an architecture that enables offline tablet usage but can get content updates when wifi is available”
STEP 3: HYPOTHESIS -&gt; SOLUTION

- Hypothesis serves as framework to solution
- Ask disproving questions
- Ensure it encompasses all assumptions, constraints, etc.
SOLVING

Solving is mapping from needs/goals to solution while honoring constraints
If we’ve done a good job in the previous steps, this can be the easiest part.
OUTCOME OF PRESENTING / CLOSING

• Obtaining buy-in from your stakeholders
• Clarity and forward momentum for team
1. Problem Statement

- Restate problem statement
- Validate once again that we are solving the right thing
2. Background / Context

- Restate 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
NEWSPAPER APPROACH

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.

NEWPAPER APPROACH

Start with a headline – what are you talking about?

“There are 3 business problems addressed by NoSQL”
NEWSPAPER APPROACH

First sentence/paragraph – elaboration of main ideas

“NoSQL will help us address x, y, and z”
NEWSPAPER APPROACH

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
READBACK – MAKE SURE YOU ARE UNDERSTOOD

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)
**CONFLICT**

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
CONFLICT

Typically not about the solution but about the problem we’re trying to solve.
CONFLICT

Inquiry vs. Advocacy
Address conflict by starting with motivation

“I'm trying to better understand your concerns"
CONFLICT

Ask questions to guide rather than confront
CONFLICT

Responding > Reacting
CONFLICT

Use “5 whys” to get to root of problem
CONFLICT

Sometimes we’re wrong

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

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<table>
<thead>
<tr>
<th>Controlling / Micromanaging (D, C)</th>
<th>Laisse—Faire / Distant (I, S)</th>
</tr>
</thead>
<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>
</tr>
<tr>
<td>Too deep in implementation details</td>
<td>Can appear in over their head / distant</td>
</tr>
<tr>
<td>Can’t let go – controls development efforts</td>
<td>Lets bad decisions run rather than confront</td>
</tr>
<tr>
<td>Appears impatient</td>
<td>Moves on too soon</td>
</tr>
<tr>
<td>It’s about the architect, not the solution</td>
<td>Assumes good intentions are enough</td>
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</tbody>
</table>
## DISC AND ARCHITECT TENDENCIES

<table>
<thead>
<tr>
<th>Jumps to Solution (D, I)</th>
<th>Analysis Paralysis (S, C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quick thinking – sometimes reactive</td>
<td>Too deep into the weeds</td>
</tr>
<tr>
<td>Not into the details</td>
<td>Needs “all info” to make a decision</td>
</tr>
<tr>
<td>Too eager for a flash of brilliance</td>
<td>Disrupting status quo requires work</td>
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EFFECTIVE ARCHITECTS
EFFECTIVE ARCHITECTS

Provide decisions and guidance to help dev teams make good choices
EFFECTIVE ARCHITECTS

Ensure team has what they need to succeed
Display emotional intelligence:
Responding > reacting
EFFECTIVE ARCHITECTS

Don’t assault other ideas – they engage with others
Walks back to assumptions, constraints, expected outcomes
FINAL THOUGHTS
“Words have meaning!”
Ambiguity

“Words have lots of meanings!”
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!

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