A dark, blurred image of a whiteboard with several colorful sticky notes (yellow, orange, pink, blue, green) and a hand holding a red marker, positioned on the left side of the slide.

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 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"

"**It's** on the wiki"

"**They** were in the room"

"**It** was in an email"

"**It's** in the code"

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

SELLING

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?

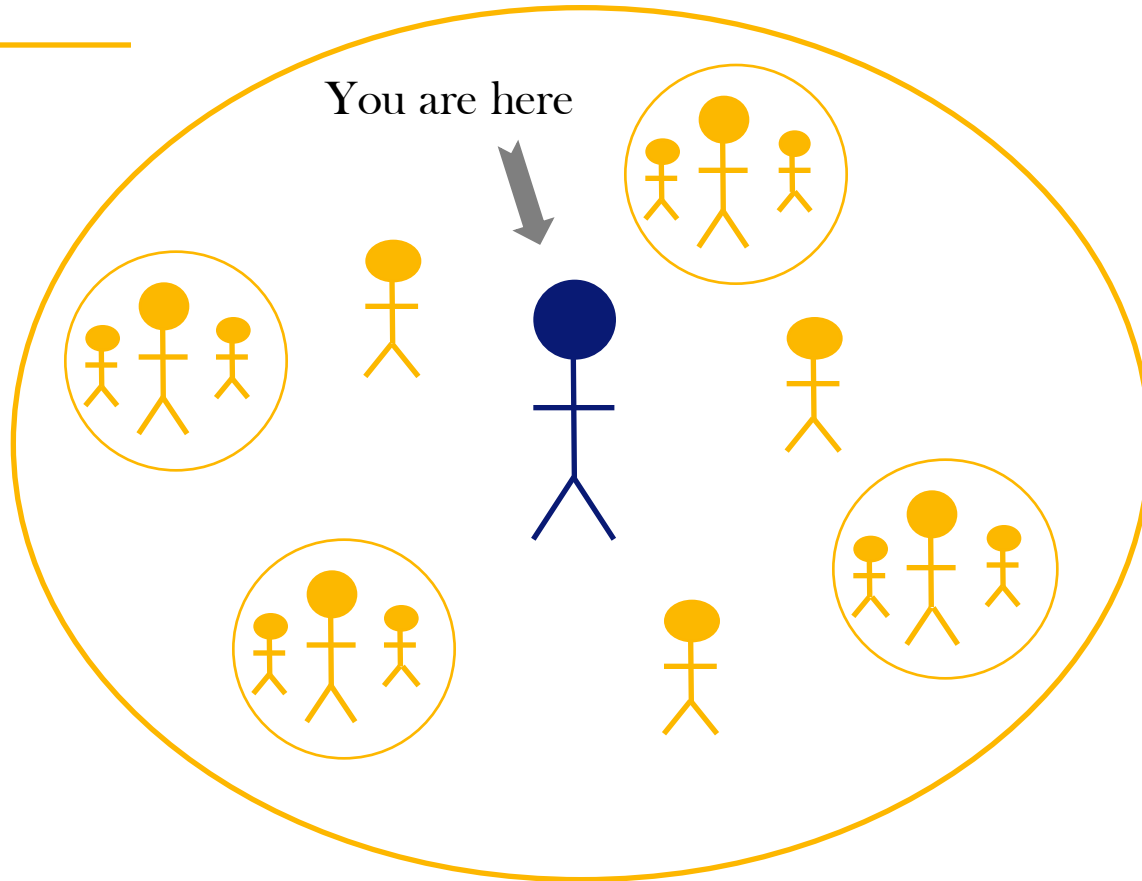
- Commonly associated with a person doing something **to** people rather than **for** or **with** them
- Selling is a conversation
- Understanding and meeting needs
- Focus first on making stakeholders successful, not ourselves

WHAT IS BUYING?

A decision that the perceived value is worth the perceived cost.

STAKEHOLDERS

COMPLEX 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

DISCUSS

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

STAKEHOLDER: DEVELOPER

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

QUALIFY

Validate:

- Assumptions
- Constraints
- Priorities

QUALIFY

Define and communicate principles
that will drive architecture / solution

QUALIFY

Confirm understanding of stakeholder
hot buttons – groundwork for getting
buy in

QUALIFY

Build trust by demonstrating listening skills, understanding of needs

QUALIFY

Verify key assumptions and constraints before diving into solution

Communication is a two-way street,
but we own understanding what
we've heard.

ACHIEVING 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..."

ACHIEVING CLARITY

Don't be afraid to be wrong!

ACHIEVING CLARITY - THE POWER OF ASKING

Questions are a sign of **strength**

ACHIEVING CLARITY - THE POWER OF ASKING

Ask questions to help guide:

- Others to understanding you
- Yourself to understanding others

ACHIEVING CLARITY - THE POWER OF ASKING

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

STEP 1: START WITH A PROBLEM STATEMENT

“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”

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.

STEP 4: SOLVING

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

FRAMEWORK FOR PRESENTING

2. Background

- Start with restating assumptions, goals, constraints, context
- Walk people into your solution
- Pave the way with understanding of needs

FRAMEWORK FOR PRESENTING

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."

FRAMEWORK FOR PRESENTING

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.

<https://www.usatoday.com/story/money/2017/09/22/walmart-skips-porch-and-delivers-right-f-ridge/692591001/>

NEWSPAPER 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

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

CONFLICT

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 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 / **D**irect

Influence / **I**nspire

Conscientious / **C**autious

Steady / **S**upportive

DISC AND ARCHITECT TENDENCIES

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

DISC AND ARCHITECT TENDENCIES

Jumps to Solution (D, I)	Analysis Paralysis (S, C)
Quick thinking - sometimes reactive	Too deep into weeds
Not into the details	Needs all info to make a decision
Too eager for a flash of brilliance	Disrupting status quo requires work

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

AMBIGUITY

“Words have meaning!”

AMBIGUITY

“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!

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