

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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## ABOUT TODAY'S SESSION

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- Architects are leaders
- Communication is a key leadership skill
- Not covering diagramming
- Not "how to give a speech"

# COMMUNICATION

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

Dictionary.com

**The greatest enemy of communication is the  
illusion of it.**

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PIERRE MARTINEAU

# THE ILLUSION OF COMMUNICATION

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“I told them that”

# THE ILLUSION OF COMMUNICATION

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“It was in an email”

# THE ILLUSION OF COMMUNICATION

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“They were in the room when it was  
discussed”

# THE ILLUSION OF COMMUNICATION

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“It’s in Confluence / on the wiki”



# THE ILLUSION OF COMMUNICATION

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“It’s in the code!”

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*Other Illusions?*

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Communication is a two-way street,  
but we own being understood.

# GOALS

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1. Understand role of architect/tech lead and what we need to communicate
2. Understand the different stakeholders with which we communicate and what they need to know
3. Understand the process for shaping and communicating solutions
4. Learn about conflict management and communication antipatterns

# **ARCHITECTS AND TECH LEADS**

# ROLE DEFINITIONS

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## ARCHITECT

- Translates business needs to technical principles
- Responsible for defining the architecture (flow of data and control across system boundaries) and design principles used to **guide** implementation decisions

## TECH LEAD

- Translates requirements into implementations that meets the constraints and principles of the architecture
- Supports development of architecture through detailed knowledge

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# *Selling*

WE SELL OUR SOLUTIONS INTERNALLY AND EXTERNALLY

**Sales is the process of helping clients succeed in a way they feel good about.**

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"LET'S GET REAL OR LET'S NOT PLAY" KHALSA, ILLIG



# 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?

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- 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?

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

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# *Stakeholders*

WHAT DO THEY PROVIDE?

WHAT DO THEY NEED TO KNOW?

WHAT ARE THEIR NEEDS / GOALS?

WHAT FRICTION CAN THEY CAUSE?



**DEVELOPERS**

# STAKEHOLDER: DEVELOPER

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## Provides:

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

# STAKEHOLDER: DEVELOPER

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## Needs to Know:

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

# STAKEHOLDER: DEVELOPER

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## Needs/Goals:

- Ease of development (and meeting timelines)
- Feeling like part of the solution (esp. senior)
- Understanding of direction
- Independence

# STAKEHOLDER: DEVELOPER

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## Friction:

- Passive-aggressive resistance
- Ongoing skepticism

# PROJECT MANAGERS

# STAKEHOLDER: PROJECT MANAGER

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## Provides:

- Budgetary and timeline constraints
- Client / business knowledge
- Overall project goals

# STAKEHOLDER: PROJECT MANAGER

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## 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

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## 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

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## Friction:

- "Not enough time for meetings"
- Armchair solutioning
- Lack of support (if needs aren't met)

**DESIGNERS**

# STAKEHOLDER: DESIGNERS

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## Provides:

- User point of view
- Usability requirements
- Long term vision / what could be
- Customer journey and intangibles

# STAKEHOLDER: DESIGNERS

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## Needs to Know:

- How engineering can enable experience
- Constraints on design / experience (and what's firm / what's flexible)
- Tradeoffs

# STAKEHOLDER: DESIGNERS

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## Needs/Goals:

- Best on-brand experience
- Understanding what's feasible

# STAKEHOLDER: DESIGNERS

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## Friction:

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

**CLIENT / BUSINESS**



# STAKEHOLDER: CLIENT / BUSINESS

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## Provides:

- Business direction & goals
- Prioritization
- Vision
- Budget

# STAKEHOLDER: CLIENT / BUSINESS

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## 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

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## Needs/Goals:

- Meeting business goals
- Seen as successful in their organization
- Justification for costs
- Confidence in team

# STAKEHOLDER: CLIENT / BUSINESS

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## Friction:

- "I've heard that \_\_\_\_ is a great technology, why don't we use that?"
- Misalignment

**CORPORATE / CLIENT IT**

# STAKEHOLDER: CORPORATE / CLIENT IT

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## Provides:

- Technology platform direction
- Portfolio knowledge / app landscape
- Constraints, access

# STAKEHOLDER: CORPORATE / CLIENT IT

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## 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: CORPORATE / CLIENT IT

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## Needs/Goals:

- How are we building this and how does it fit in to enterprise arch?
- How does this help short- and long-term tech objectives?



# STAKEHOLDER: CORPORATE / CLIENT IT

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## Friction:

- Gatekeepers (review boards, security review, etc.)
- Delayed access needed for review
- Competition

# DISCUSS

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Are there other stakeholders with different needs?

Have you run into challenging scenarios with respect to stakeholders?

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# *Selling Part II*

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.**

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DALE CARNEGIE

# SHAPING AND COMMUNICATING A SOLUTION

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

**RESEARCH**

# RESEARCH

## Communication skills:

- Listening
- Inquiry

# RESEARCH

Understand stakeholders and their needs



# RESEARCH

Inquiry vs. advocacy

# RESEARCH

Listen to understand, not to interrupt

# RESEARCH

Set yourself up to start with the end in mind

# RESEARCH

Find the actual problem statement

## PROBLEM STATEMENT

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Our solutions are valuable only if our business / clients / users see them as solving meaningful problems

**QUALIFY**

# QUALIFY

Communication skills:

- Dialogue

# QUALIFY

Validate:

- Assumptions
- Constraints
- Priorities



# QUALIFY

Define and communicate principles that will drive architecture / solution

# QUALIFY

Read back value of solving problem

# 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

# CLARITY AND CONFLICT

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

**SOLVE**

# **THE MARSHMALLOW CHALLENGE**

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**SOLVE**

Control need for instant gratification in  
solving

# SOLVE

Ok to solve in your head, but use that to ask disproving questions, not questions to enforce confirmation bias

**SOLVE**

However...avoid analysis paralysis

# SOLVE

This approach leads to greater success  
and fuller understanding of problems

# SOLVE

Solving is then mapping from needs/goals to solution while honoring constraints

**PRESENT**

# PRESENT

Start with re-stating assumptions, goals, constraints, etc.

# PRESENT

Walk people into your solution – pave the way with value / needs



# PRESENT

Might present multiple times, addressing different stakeholders

**PRESENT**

# Inquiry vs. Advocacy

# PRESENT

Remember: documentation is a **snapshot**,  
communication is an **interaction**

**BREAK**

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# *Tips and Techniques*

## RECAP

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- Process starts with the end in mind: know your desired outcome and pave the way to it
- Know your audience and address their needs (complex with multiple stakeholders)

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

# AMBIGUITY

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“Words have meaning”



# AMBIGUITY

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“Words have **lots of** meanings”

# ACHIEVING CLARITY - THE POWER OF ASKING

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Questions are a sign of strength

# ACHIEVING CLARITY - THE POWER OF ASKING

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Ask questions to help guide:

- Others to understanding you
- Yourself to understanding others

# ACHIEVING CLARITY - THE POWER OF ASKING

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Ask questions to **disprove** your  
theory

## EXAMPLE QUESTIONS

Will the users have good wifi?

## EXAMPLE QUESTIONS

When you say “data warehousing” what does that mean to you?

## EXAMPLE QUESTIONS

“Lean” has a certain meaning in our industry, but what do you mean when you say you have a lean organization?

## EXAMPLE QUESTIONS

When you say that queues are the only way to solve this problem, what problem specifically are you trying to solve?



# ACHIEVING CLARITY - THE POWER OF ASKING

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Read back your understanding

# READBACK - MAKE SURE **YOU** HAVE UNDERSTOOD

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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..."

# READBACK - MAKE SURE YOU **ARE** UNDERSTOOD

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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?"

# ACHIEVING CLARITY - THE POWER OF ASKING

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Don't be afraid to be wrong!

# **BUSINESS PROBLEMS**

## WHAT IS A PROBLEM?

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Remember: it's not a problem until  
a stakeholder says it is

# BUSINESS DISCONNECT

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The following are not business problems:

- Slow queries
- Bad throughput
- Server upgrades / buying more servers
- Code needing refactoring
- Library upgrades
- Bugs

# BUSINESS VALUE

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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



**STORYTELLING**

# STORYTELLING

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- 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**

# NEWSPAPER APPROACH

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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-fridge/692591001/>

# NEWSPAPER APPROACH

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Start with a headline – what are you talking about?

*“There are 3 business problems addressed by NoSQL”*

# NEWSPAPER APPROACH

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First sentence/paragraph – elaboration of main ideas

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

# NEWSPAPER APPROACH

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Body paragraphs: spiral down into the details, reinforce message

*"The first problem, x, will be addressed by..."*

# NEWSPAPER APPROACH

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



# TEACHING METHOD

# TEACHING METHOD

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- Tell people what you're going to teach them
- Teach them
- Tell them what you taught them
- Wrap up with relevant story / example

**CONFLICT**

# CONFLICT

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Two kinds of conflict:

- Conflict of ideas (good)
- Conflict of people (bad)

# CONFLICT

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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

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Typically not about the **solution** but about the **problem** we're trying to solve.

# CONFLICT

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## Inquiry vs. Advocacy



# CONFLICT

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Address conflict by starting with motivation

*"I'm trying to better understand your concerns"*

# CONFLICT

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Ask questions to guide rather than confront

# CONFLICT

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Responding > reacting

# CONFLICT

---

Use "5 whys" to get to root of problem

# CONFLICT

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Sometimes we're wrong

"All of us are smarter than any of us" – Tim Brown

# COMMUNICATION ANTIPATTERNS

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# COMMUNICATION ANTIPATTERNS

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"As I've said before..."

# COMMUNICATION ANTIPATTERNS

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"That's just common sense"



# COMMUNICATION ANTIPATTERNS

---

“Words have meaning”

# COMMUNICATION ANTIPATTERNS

---

"I know that"

# COMMUNICATION ANTIPATTERNS

---

"I'm really busy"

# COMMUNICATION ANTIPATTERNS

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"I told them"

# COMMUNICATION ANTIPATTERNS

---

“Because I said so...”

# COMMUNICATION STYLES

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DISC

# DISC OVERVIEW

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**D**ominant / **D**irect

**I**nfluence / **I**nspire

**C**onscientious / **C**autious

**S**teady / **S**upportive

# DISC AND ARCHITECT TENDENCIES

<b>Controlling / Micromanaging (D, C)</b>	<b>Laissez-Faire / Distant (I, S)</b>
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

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<b>Jumps to Solution (D, I)</b>	<b>Analysis Paralysis (S, C)</b>
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

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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

## WRAP UP

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



# THANK YOU!

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Meet the Experts, Wednesday 10:15am

ORM Booth, Sponsor Pavilion