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SMACNA ANNUAL CONVENTION

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You Don't Need Another #@%!# Project Management Tool!

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2025 SMACNA ANNUAL CONVENTION

A decorative illustration at the bottom of the slide. On the left, there are dark brown mountains. In the foreground, there are stylized waves in shades of blue and green. On the right, there is a large, vibrant pink and purple hibiscus flower. The background of the bottom section is a light yellowish-tan color.

Who is this guy?

and where did you say he's from?

- Grew up in Calgary, Alberta, Canada
- Live in Flin Flon, Manitoba, Canada waaaaay north
- Piping designer, started in the family design & engineering business about 15 years on big projects in Alberta
- About 15 years helping engineers and constructors manage their business better, half that time with Trimble



Topics

- 1 A brief history of project management
- 2 Organizational FOMO
Why constructor's buy PM software
- 3 It's all about the process
Better reasons for buying software
- 4 Have you lost your mind?
If you insist on changing your system
- 5 If you're spending money, spend smart
Getting salespeople to leave you alone

**When did project
management start?**

A brief history of Project Management

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Ancient builders

The core principles of project management are nothing new



What did it take to build these monuments?

- Planning
- Leadership
- Organization
- Logistics
- Change control



Project Management

Industrial Revolution

Complexity drove innovation

As civilization advanced, the things we built became more complicated

Projects were bigger, involved more people, and more material, and the stakes were bigger

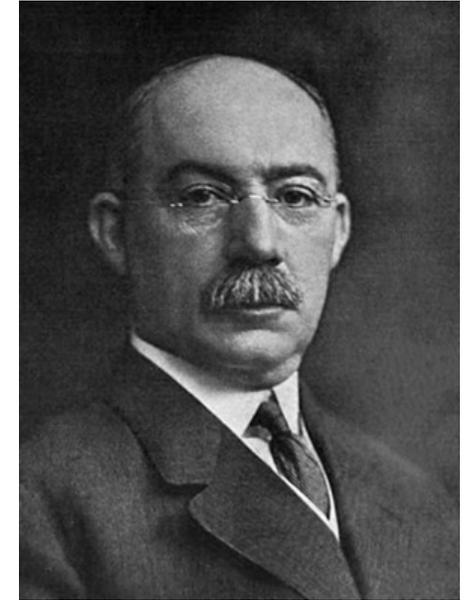
Standard methods began to emerge



Frederick Taylor

The Principles of Scientific Management, 1911

Improving industrial efficiency
Time & motion studies



Henry Gantt

the “Gantt chart”

Famously used on the Hoover Dam and Interstate system

Influenced CPM and PERT methodology

During and after WWII

US Government becomes the
largest PMO in the world

After the war, America was building...

Key methods formalized in the '50s

- Critical Path Method (CPM)
- Program Evaluation and Review
Technique (PERT)



**Why do you buy project
management systems?**

Organizational FOMO

Why constructors buy project management software

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The consultant says

Companies buy project management technology as a direct response to severe operational and economic pressures.

It's an investment designed to stabilize project outcomes and secure long-term viability against market volatility.

blah blah blah blah

What drives many project management technology purchases

FEAR

...of falling behind

...of losing people

...of losing work

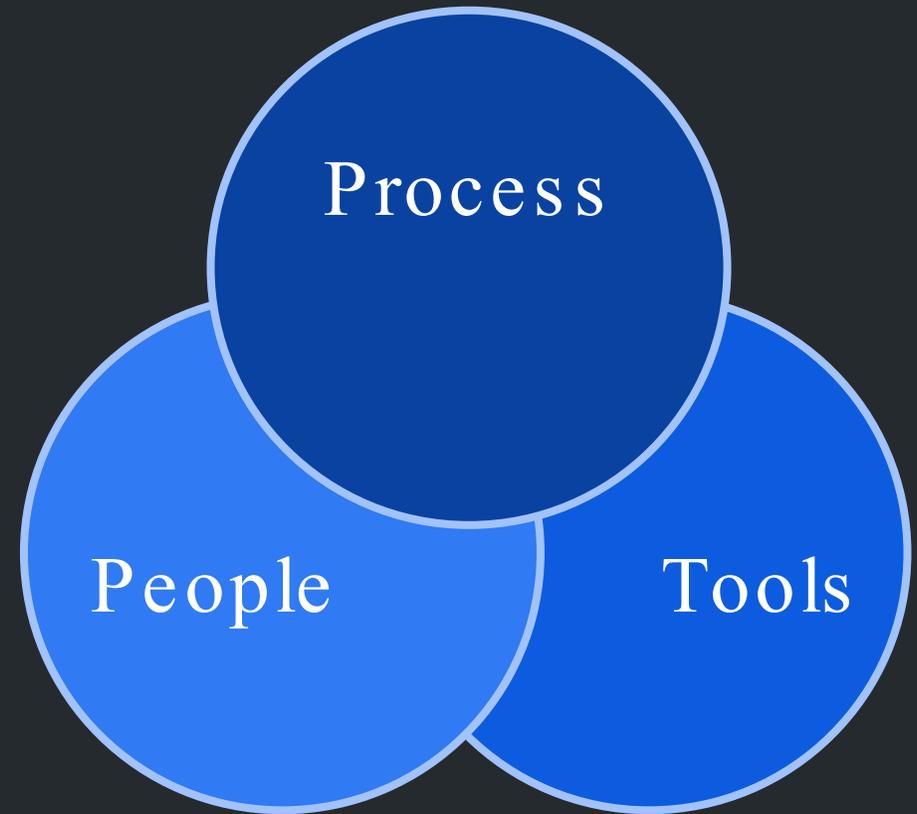
...of cost overruns

...of missed opportunity

You already have a project management system

It's not about software

Your company already **IS** the project management system



**We're not talking about buying
software.**

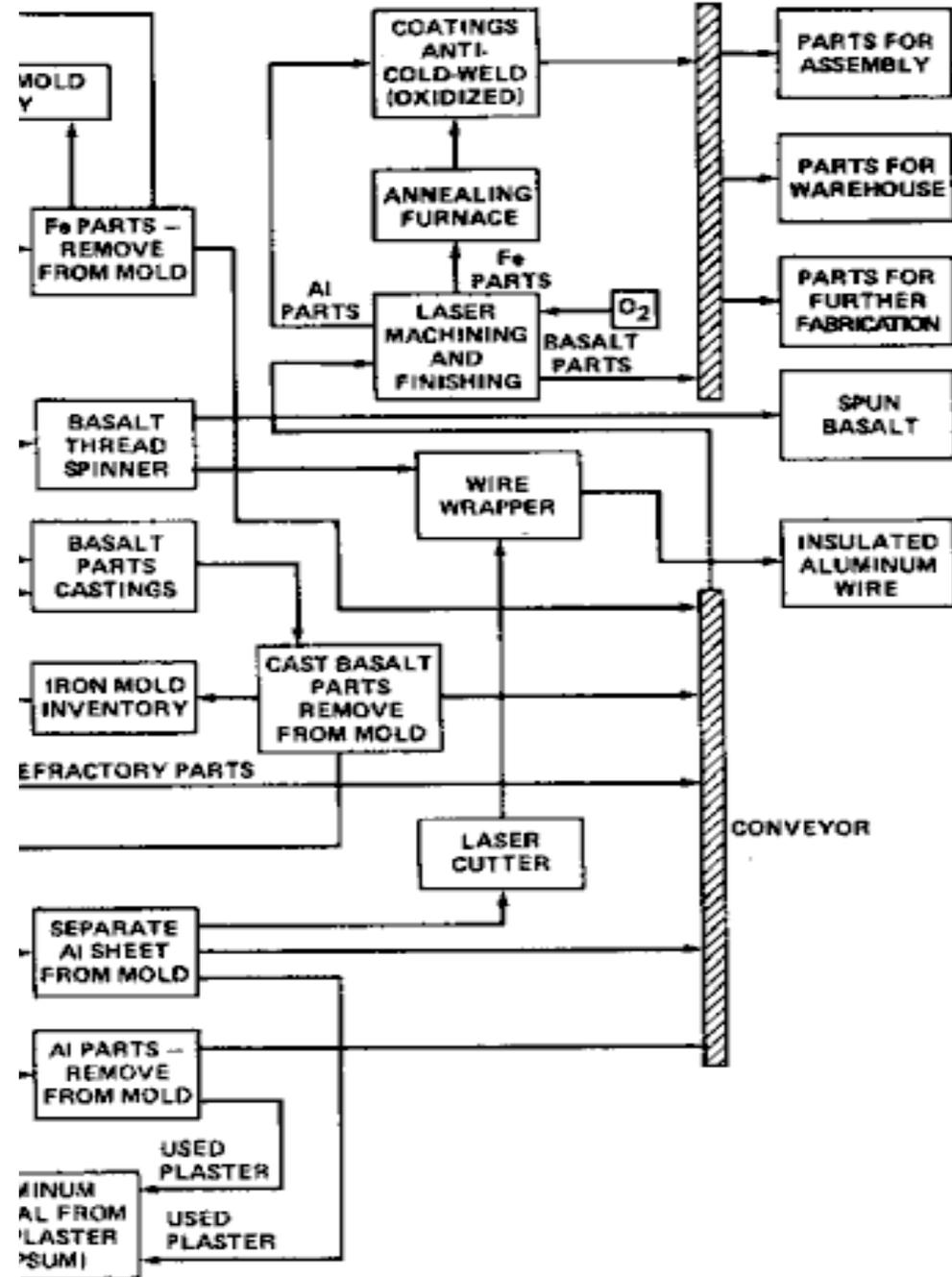
**We're talking about making
changes to your company.**

What are some good reasons to change your company?

It's all about the process

Better reasons for buying software

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Think strategically

Some examples...

- Risk management
- Defending and improving your margin
- Coping with labor shortages and demographic changes
- Customer expectations and requirements
- Local standards and practices
- etc. etc.

Risk management

Specialty contractors operate in a high risk environment

- Majority of cost out of your control
- Persistent labor shortages
- Aggressive schedules

Strong project management is your risk mitigation strategy

But is it worth it?

16% - 1500%

Return on Investment (ROI) of
implementing BIM-integrated
Construction Project Management
Systems

20 years of construction project management research

Results may vary

Protecting your margin

Material	25% - 40%
Shop labor	10% - 15%
Field labor	20% - 30%
Overheads	15% - 25%
Margin	5% - 10%

How much does it cost?

- one missed change order
- one screw-up in the shop
- misreading a spec
- late material
- using an old drawing

On a \$1M job, you're only \$50,000 away from being a charity

How does a good project management system protect margin?

Immediate cost visibility

- Dashboards update in real time
- Commit update when PO is issued
- Earned value updated as tasks are completed
- Issues or RFI's immediately include potential impacts to the budget

Prevents rework

- Clash detection, RFI's, photos, progress measurement
- Connected to *the budget, the model (or drawings), and* available in the field

Dispute defence

- You hold the audit trail for all decisions and communications

Coping with labor shortages and demographic changes

Productivity Boost

- Simplifies documentation tasks like RFI's, photos, daily reports etc.
- Eliminates (if possible) double entry ie. change orders, commitments, budgets etc.
- Put's AI to work on repetitive tasks (counting, reporting etc.)

Enables digital natives

- 3D first if possible
- Short form entry
- Mobile

Knowledge preservation

- Captures institutional memory that will feed AI
- Smooths the bumps of employee turnover

Can you do all of that today?

What are your biggest gaps?

Remember...

Your company is the project management system.

A model for assessment

People

Tangible: quantity, experience, skill sets, training, performance

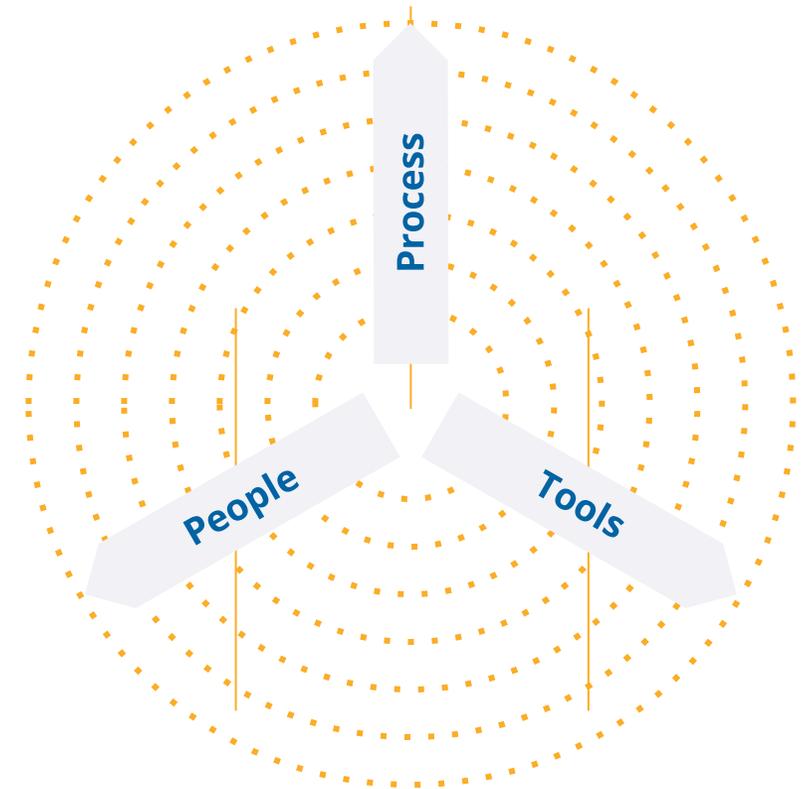
Intangible: culture, teamwork, integrity

Process

Formality, compliance, repeatability, forms, procedures, simplicity, functionality

Tools

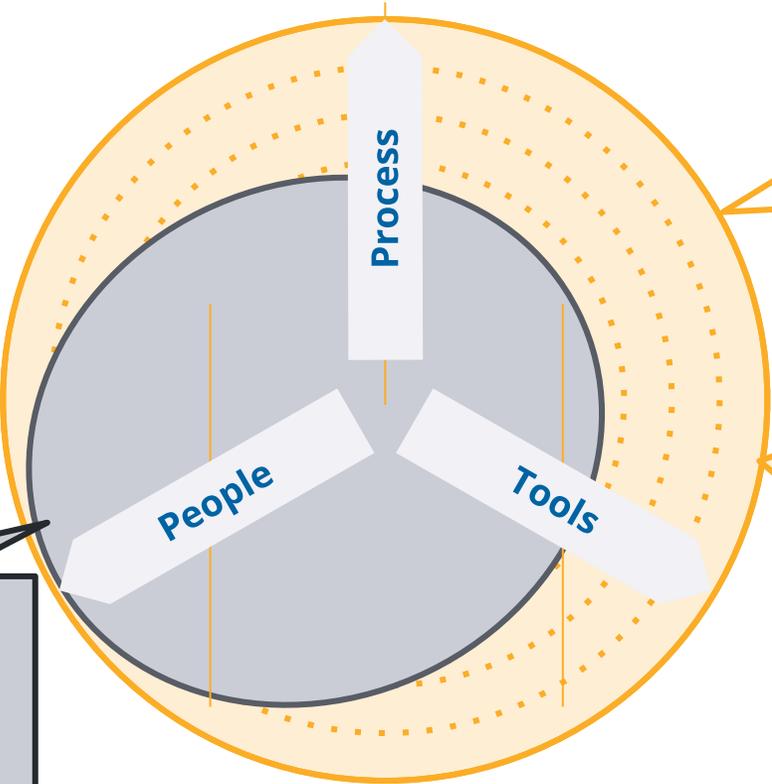
Standardization, manual vs. digital, connectedness, repeatability, setup time



Reference: Leavitt's Diamond Model, eventually refined into the Golden Triangle

Overhead = Project Management Spend

Example
Revenue = \$100M
Overhead = \$25M



\$25M Overhead spend
Office, management, equipment,
infrastructure, computing, etc.

Also includes unplanned job cost

Other costs
Ad-hoc tools, poorly used tools
Extra labor for double-entry
Missed change orders
Rework & errors
Back charges
Risk

Project Management System
Great people
OK Processes
OK tools

Three big breakdown indicators

If any of these are true,
your project management
system isn't working like it
should

1

You have too many surprises

Cost, quality, schedule, scope etc.

PM's more than once a week

Exec's more than once a month

Ownership more than once a quarter

2

Progress reports require a meeting

No automated reports or dashboards

You should be using meetings to solve
problems, not find out about them

(See also #1)

3

Value of missed or incomplete claims

is more than 25% your margin

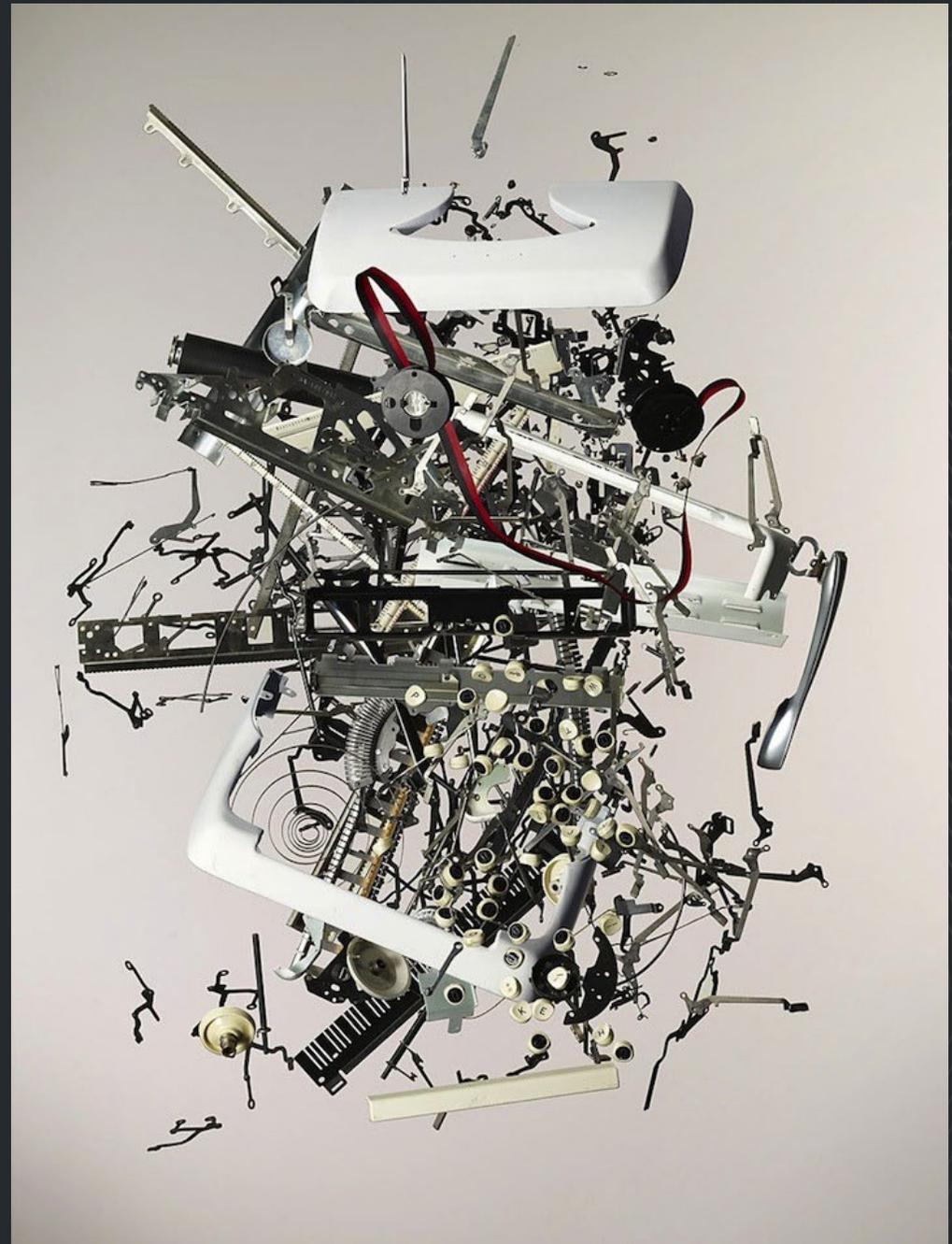
Worse, you don't know how much your
missing on claims

(See also #1 & #2)

What part of your project management system has the largest impact on your bottom line?

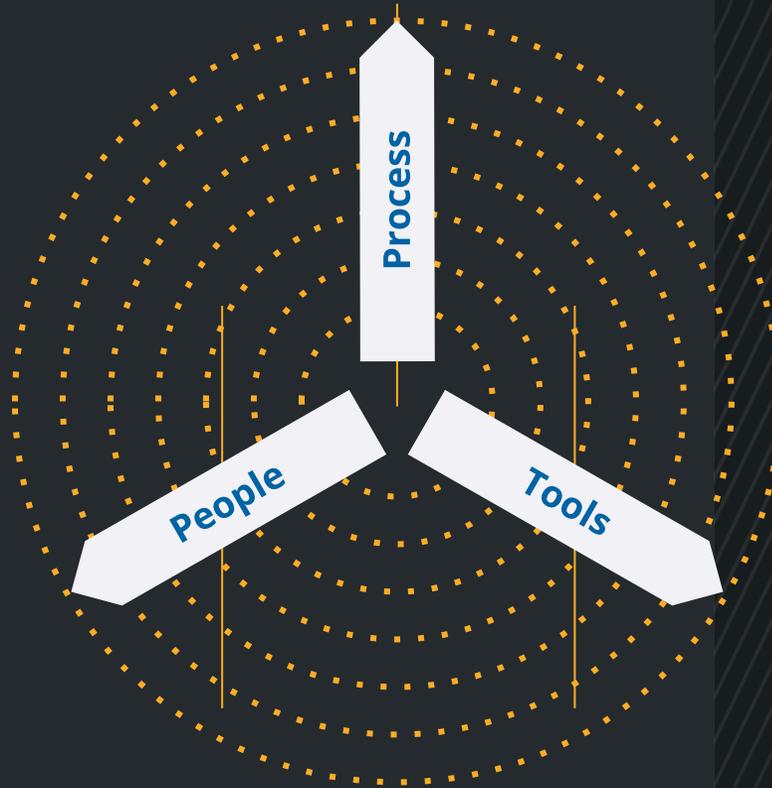
Have you lost your mind?

If you insist changing your system



Make the right changes

(Hint: you probably shouldn't start with the tools)



Construction project management maturity assessment is hard

- Classic models are complex / overwhelming
- Must also include safety, health, & environmental maturity
- Shop & field environments differ

Free Advice

People

- Easy to assess, hard to address
- Invest in finding & keeping good people

Process - REALLY IMPORTANT

- Good process can make up for shortcomings in tools & people
- If you don't have good processes

STOP

Tools

- Software is just a tool, just like the equipment on the shop floor and the hand-tools in the cart
- Battery analogy - if you switch brands, you need to switch batteries too!
- Tools aren't your edge, how you use them (process) is

If you're spending money, spend smart

Getting salespeople to leave you alone



Figure yourself out first

The more you know about yourself, the easier this will be

Budget

Know what you're spending today

- People
- Technology
- Rework
- Risk
- etc.

Authority

Who's makes the final decision? ("silent" partners, family, customers, etc)

If you don't know who's buying, don't go shopping

Hint: Who was involved in your largest spend in the last 5 years.

Need

What strategic things are you shopping for?

- Cost control
- Productivity
- Decision speed
- Risk management

Hint: If you have to explain it to your decision maker, it's not what your buying.

Timing

When do you want results?

System change takes 12-24 months

Don't let anyone convince you they can do it faster

People buy from people Culture buys from culture

Figure out your “buying culture”

Vendors & commodities

Buys in small units, from many
different suppliers

Happy to assemble things from the
same supplier

Strong integration skillsets

Supplier personnel come & go

Partners & systems

Consolidates to as few partners as
possible

Prefers to buy things already
assembled or packaged

Expects integration out-of-the-box

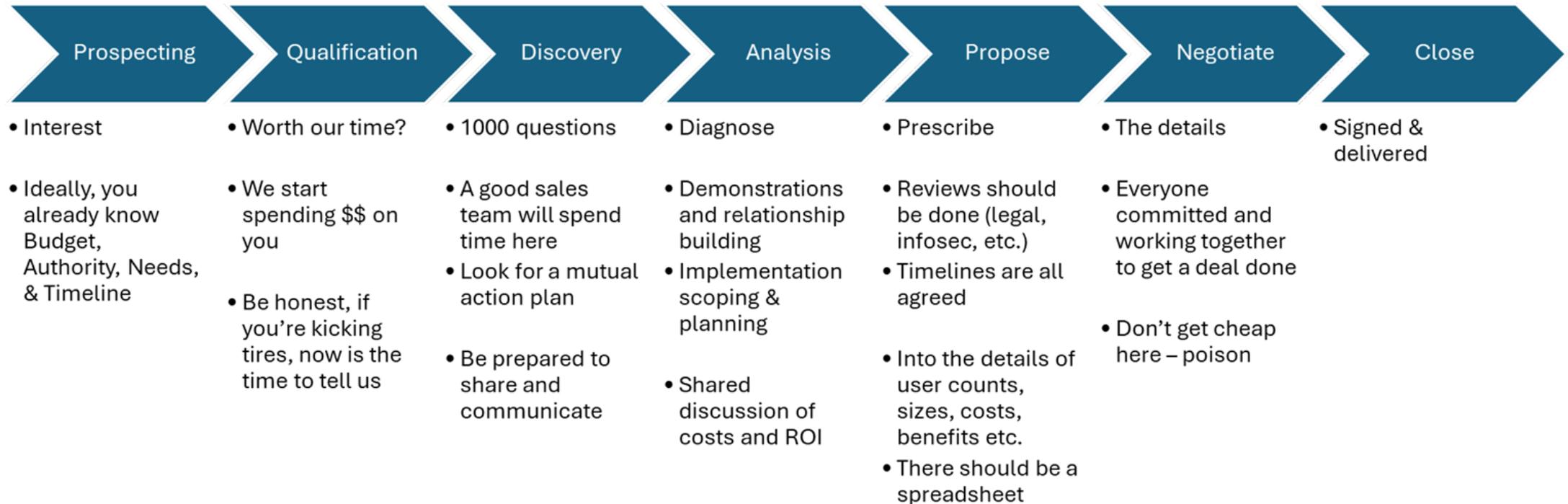
Long terms partner relationships

Put in the work

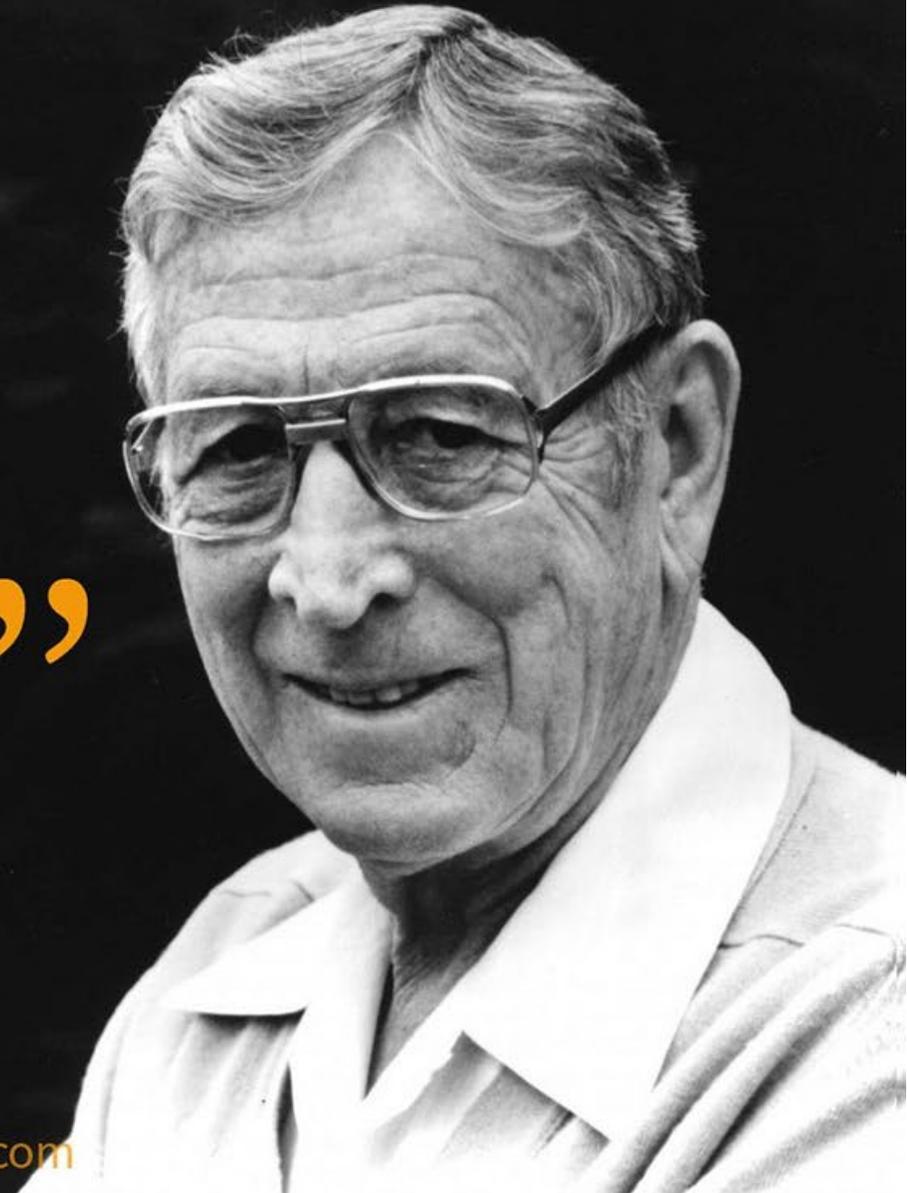
- Get to know the sales team & how they're paid
- Understand their revenue model & goals
- Go to the shows and conferences
- Entertain your partner as you expect to be entertained

The cost of software is nothing compared to what you'll spend after you buy it. Invest up front to make a good choice.

Typical software sales process



“ IF YOU DON'T HAVE TIME TO DO IT RIGHT,
WHEN WILL YOU HAVE TIME TO DO IT OVER?
- JOHN WOODEN ”



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Let's review

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Please take a moment to complete the session survey provided to you.

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