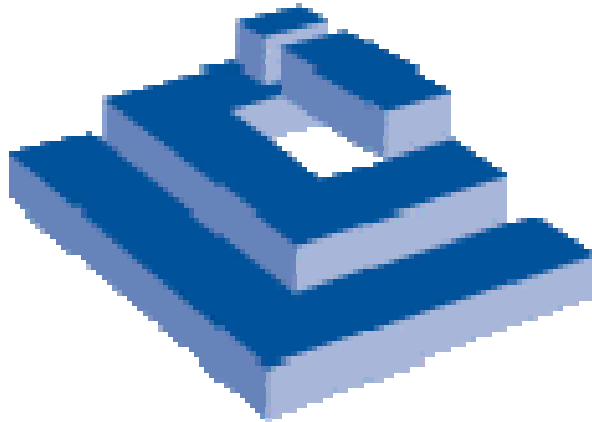


Lean Construction Institute

Building Knowledge in Design and Construction

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New England Community of Practice



June 23, 2011

Lean Planning Tools

Marya Gorczyca and Kelly Meade

Haley & Aldrich, Inc.

Background: Haley & Aldrich, Inc.

Professional Services in Geosciences: Environmental Consulting, Geotechnical Engineering, Geothermal

- Organized Nationally, one P&L, 3 Business Units, 9 Market Segments
- 54 years of national and international projects
- 450+/- staff in 20 offices
- Privately owned by 100+ shareholders (30% of staff)



How did this all start for Haley & Aldrich?

Timeline - Some Key Milestones:

- **2004** - What “Management” was seeing
- **2005 - 2007** - Period of investment and learning (Internal processes, thoughtful external experimentation)
- **2007** - Training core group of practitioners
- **2008** - Client demand to reduce cost of delivery
- **2009 - 2011** - Process improvement in other client organizations

What we'll do today:

Explain

Try and Learn

Reflect



Workshop Rules

Respect others • Tell the truth

Do your share • Try something new

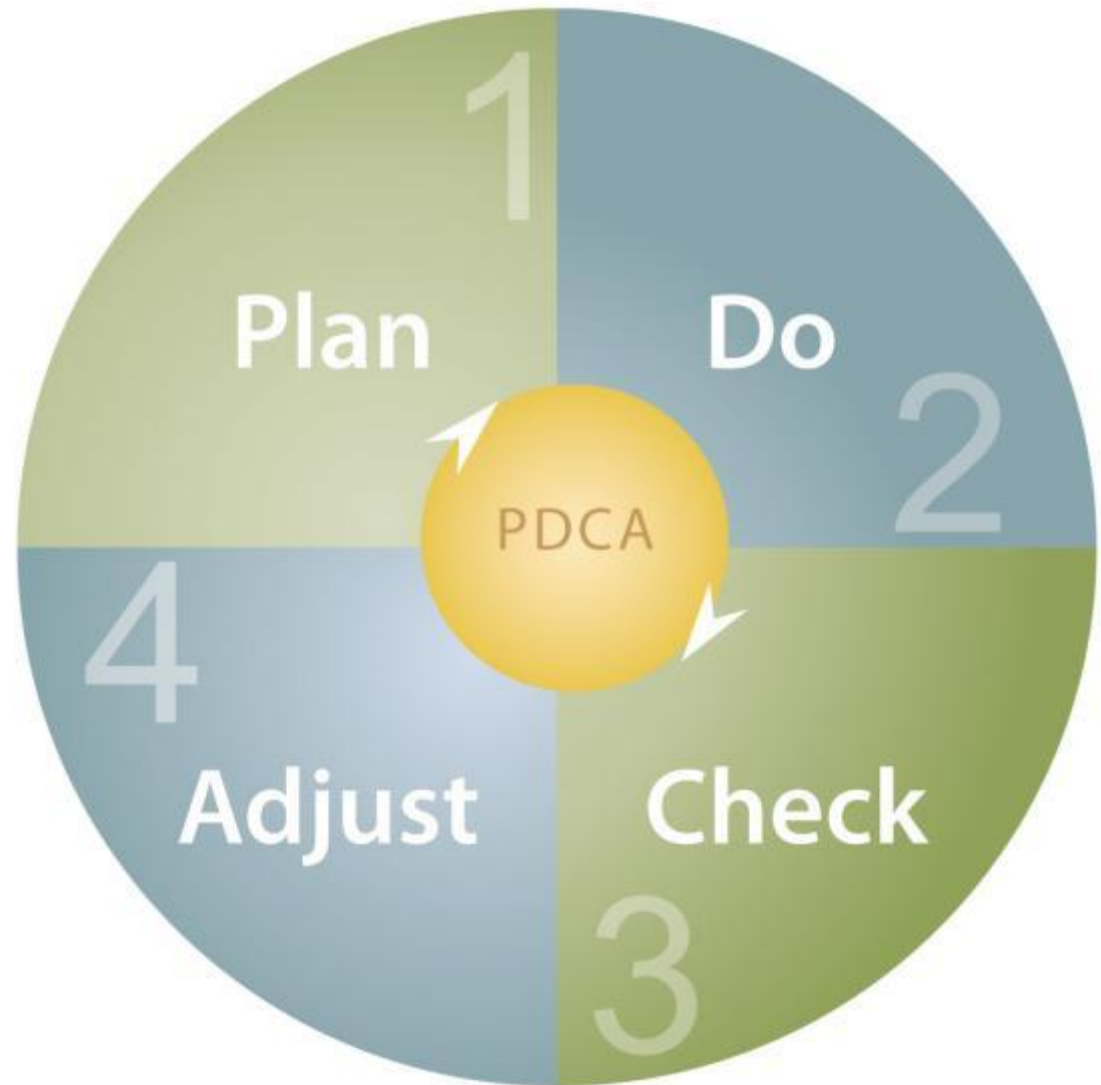
Ask “why?” • 70/70/70

Be safe/ think safe

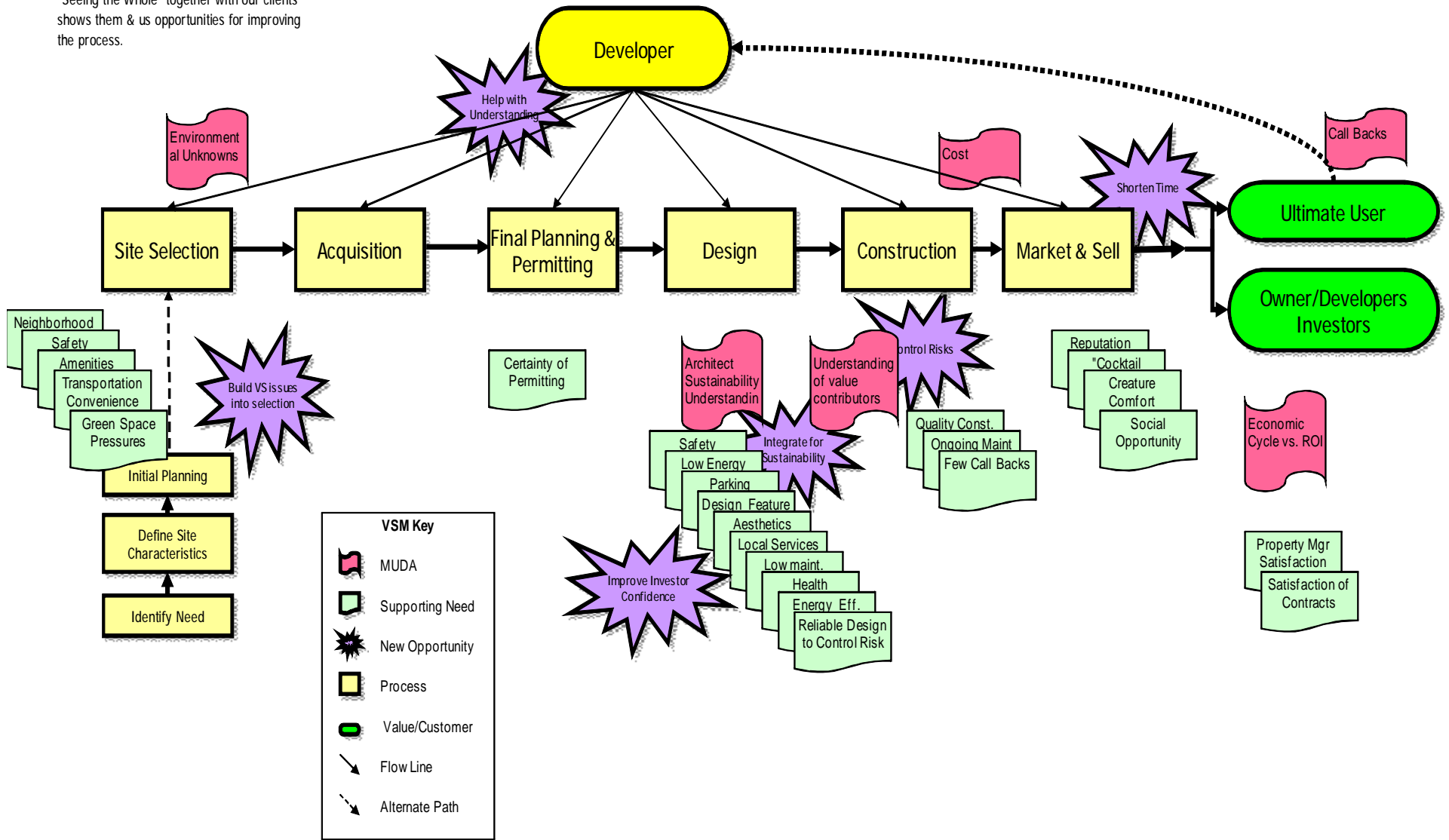


Lean is a proven approach to:

Increase **Value**
Reduce **Waste**
Respect **People**



"Seeing the Whole" together with our clients shows them & us opportunities for improving the process.



**Subcontractor
Selection/Award**



Submittals



**Authorization to
Proceed**

Process & Problem: submittal process



TOOLS WE'LL USE:

- Brainstorming
- Affinity diagrams
- Multi-voting
- Value stream mapping
- Impact/Difficulty

**Desired Outcome:
Understand / see value
vs. waste in process
ID improvements**

Lean Tool



Brainstorming

Brainstorming:
*to provide a group with a wide range of ideas around
any topic*

5 min Brainstorm: who are the customers & stakeholders of the submittal process?

1. Stand up!
2. Think about who the customers and stakeholders are of the submittal process. Is there more than 1?
3. Write 1 customer or stakeholder on each green sticky using a black sharpie.
4. Post your customer / stakeholder on the wall



Lean Tool



Affinity Diagram

Affinity Diagramming:

To organize facts, opinions and issues into natural groups to help diagnose a complex situation or find themes

5 min Affinity Diagram: group customers / stakeholders

1. Silently group customers / stakeholders into logical buckets
2. If you disagree with the placement, write another green sticky!
3. Reflect: what seem to be the groups?
4. Decide together what label is appropriate for each group
5. 1st Affinity Diagram complete!



Group 1

Customer

Customer

Group 2

Stakeholder

Stakeholder

Group 3

Customer

Customer

20 min total: Brainstorm and Affinity Diagram for customer / stakeholder VALUE

1. Think about what each customer/stakeholder group values from the submittal process. What are their desired outcomes? What do they need during the process?
2. Write down 1 value per green sticky using your black sharpie.
3. Post your value underneath the customer / stakeholder group
4. Try talking to each other: as you put a value up, state what it is – this stimulates others' thinking!
5. Is there a need for affinity diagram? Do these values need to be grouped? Decide together.



Group 1



Group 2



Group 3



Lean Tool

Depicts flow of activities, materials, information and people applied to create and deliver value.



Value stream map

Let's us see, understand and act on the system together

Steps to VSM



Seeing the whole system with a value stream map



Let's do it – start a “current state” value stream map of the submittals process

1. Identify the steps involved in the submittals process.
2. First identify the scope: what are the beginning and end points?
3. What are the steps in between?
4. Work together to write and post the steps in a flow from left to right to deliver value as they happen today. Use 1 yellow sticky for each process step
5. Rearrange them as you see fit – communicate with one another



TIM WOOD:

Seven Deadly Resource Wastes



*Hi,
I'm
Tim!*

Transportation

Inventory

Motion

Waiting

Overprocessing

Overproduction

Defects

Lean Tool

**Impact/
Difficulty**

V
A
L
U
E

H

Act
here
first

I
M
P
A
C
T

L

L

DIFFICULTY TO
IMPLEMENT

H

Reflection/Wrap up

What did we learn?



- **Brainstorming**
- **Affinity diagrams**
- **Multi-voting**
- **Value stream mapping**
- **Impact/Difficulty**



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