

# Four Lessons

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# Do what works all the time

- If something works (provides value) then do it often
  - Every time we integrate, test, review or talk and listen we learn
    - What broke since the last time
    - What we heard isn't always what was said
    - How to improve
- Look at what you do
  - Does it provide value and meaning?
    - Consider doing it all the time
  - If it hurts is it because we avoid it?
    - Look for ways to do what hurts earlier and more frequently

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Lesson number 1: Do what works all time.

If something works, why not do it all the time? Think about it:

Every time we integrate or merge our work together we learn something.

Every time we test what we have just done we learn something.

Every time I review what you have done or you review what I have done we learn something.

Every time we talk with and listen to our customers we learn something.

What do we learn? We learn what we broke since the last time we integrated, tested, reviewed or talked with our customer. We learn that what we thought we heard isn't always what was said. We learn how to make the product better.

Here's another way to look at this lesson. Take a look at your project and identify what hurts. Are there activities you avoid because every time you do them they hurt? These activities are prime candidates to do all the time. I've seen some teams avoid merging their work because it takes a long time to sync all the changes. The solution? Merge all the time – merge little changes, not big changes. Several things happen when you do this. Merging no longer hurts. The merged code base is fresh, containing fairly recent changes. The merged code base works, because the last version worked, and we're not making that many changes to this version, so any clean up is relatively simple.

To use this lesson identify the tasks and activities that provide real value to your project. Look for the activities that hurt on your project. These are candidates for doing all the time. Once you've identified these tasks and activities look for ways to do them more often.

Finally, "do what works all the time" doesn't mean that literally. It means doing important tasks on a more frequent basis. This could be done on regular intervals, like we merge the code base once a week or every day, or on as needed basis – as soon as Bob's feature is implemented, we'll merge the code base.

# Everyone wants to go “MAD”

- Make A Difference and a little history
  - I have met very few people who want to do nothing
  - My experience is the vast majority of people want to
    - Make A Difference
    - Be a part of something bigger than themselves
- A culture that encourages people to “MAD”
  - Is built on trust
  - Has common goals and beliefs
  - Is safe
- Look for moments of trust, collaboration and courage
- Ask why a group is operating
  - At less than full capacity
  - At greater than full capacity (synergy)

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## Lesson 2: Everyone wants to go “MAD”

This lesson has some history to it. It originally was “Everyone has value” or as my wife likes to say “everyone brings a gift to the table. No matter what you think, everyone on the team was hired to do good. Everyone on the team has value. Every person brings something to the table: a unique skill or ability, information, or a useful perspective.

While I still believe this, I also started to think a little differently. I believe that everyone wants to make a difference (MAD). People want to make a difference in their work and they want to be part of something bigger than themselves.

If we believe people want to make a difference, then we need to make sure the culture encourages this. This means a culture that is based on trust and has clearly understood goals and beliefs. Then we find people who want to go MAD. But there is an important component to going MAD – a sense of safety. A sense that the work place is a safe place to speak the truth, to state one's opinion but also to listen, respect and understand the opinions of others.

In your own organization, look for moments of trust, collaboration and courage, when, not matter how things are going, there's a sense of synergy, a sense that people are pulling together to accomplish things. When you see a group operating at greater than full capacity, ask questions in order to find out the secret of their success. When you see a group that is operating at less than full capacity do the same thing: ask why.

# Don't work in the dark

- The longer you work in the dark
  - The greater the risk that what you are doing will be wrong
- It's all about feedback
- How much work are you willing to throw away?
  - You need feedback a little more often than that
- If you are not receiving the feedback you need
  - Ask for it
  - Create it
    - Checklists
    - Guidelines
  - Deliver in small, meaningful independent pieces

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## Lesson 3: Don't work in the dark.

You want rapid feedback on what you do, what you think, what you say. When you have rapid feedback, you never get very far off course, you're always making small corrections to keep you on course.

When you don't have rapid feedback you're working in the dark. The longer you work in the dark, the longer you work without feedback, the greater the odds that you, your work, your project will be off track.

But you need to be careful about feedback. You need to make sure you understand what feedback is related to what activity. Sometimes feedback is separated from the activity that causes it and that can be confusing. We tend to associate feedback with the "nearest" activity. If there's a time delay we may be associating feedback with a totally unrelated activity. Look for true cause and effect. Find ways to generate early, rapid and understandable feedback.

The easiest way to use this lesson is to start by asking yourself how long are you willing to work in the dark. How long are you willing to work without really knowing if you're on track? The answer to that question is how much work are you willing to throw away. Maybe that's a few hours, or a few days, but I'm willing to guess it is not much more than that. Look at ways to design your work so feedback is a natural outcome of what you do.

If you're not receiving quick feedback there are some things you can do:

- Ask for feedback from those you work with
- Create feedback by using checklists or guidelines that you can use to track where you are and how well you are doing
- Deliver your work in small, meaningful independent pieces, chunks of work that can be measured and tested so you can determine if your efforts are on track

# Make it better

- This used to be “Do no harm”
  - But that is simply not good enough
- The first small step to improvement – commit to make it better
  - Without commitment don't bother starting
- Before you start
  - Don't know what to do? Come up with a plan
  - Don't feel motivated? Talk to someone who cares
  - Don't have the skills to solve the problem? Find someone who does
  - Not sure what done means? Plan a transition
- Before you hand something off or put it down ask “Did I make it better?”
  - If the answer is no, there's more work to be done
    - This might mean asking for help

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## Lesson 4: Make it better.

I first wrote this lesson in the summer of 2004. I refined it in 2005, then started writing the speaker notes in the summer of 2005. Then in the fall of 2005 I almost changed the title of this slide to “Do no harm.” That sounded good and reasonable, but, luckily, very quickly I knew that was wrong. To “do no harm” is too passive. What I meant from the beginning and what I still mean is “make it better.”

The first step to real improvement is a small one: just make it better. This lesson requires courage, perhaps more than any other. If you're not willing or able to make something better, then don't bother picking it up. If you don't know how to make it better, don't pick it up. Have the courage to say no. But if you do decide to pick it up, don't put it down until you've made it better. Better yet, don't pick it up until you've thought of a plan or way to make it better, then pick it up and make it better.

This lesson, like the others, can apply to a wide range of situations, even to personal relationships. In fact, that's where I first learned this lesson. A co-worker didn't like how I communicated a problem on a project. The truth is the other person was a roadblock to the project. Either they needed to get their work done, or get out of the way and let someone else do it. The person came to my office clearly mad, spitting fire. I let him rant at first and let off steam, then we talked about the problem, why the work wasn't done, what could we reschedule, what could we do differently. After about 30 minutes the person was running out of steam and was ready to leave. I asked “Do you feel better now than when you first came to my office?” He said no and I said the meeting wasn't over yet, and that the meeting wouldn't be over until he felt better about the situation. In other words, I was determined to make it better. I didn't compromise, but I was willing to work with him to improve the situation and as a result, improve the project. After another 90 minutes, we had the situation resolved, we found a way for him to get his work done. More importantly, we repaired the relationship, we both came out of that meeting with greater and renewed respect for each other and a determination to “make it better.”

There is one danger to this lesson, unlike a dog with a bone, we must be willing to recognize when we aren't making it better. In those situations, we need to kick start our efforts or come up with a transition plan so that someone more motivated, more knowledgeable can take the problem on.

## Four lessons

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- Do what works all of the time
  - Everyone wants to go MAD
  - Don't work in the dark
  - Make it better
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- And now, for a real life, non-software application of the four lessons...

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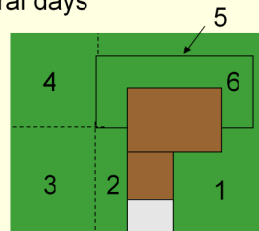
All right, four lessons that, for me, sum up the essence of agile development.

Now let's look at a real life application of these lessons.

# Mowing the lawn

## An application of Agility

- My lawn is 125' by 150'
  - Start to finish it takes about 3 hours
- An all or nothing approach sometimes gets it done, but...
  - It might
    - Rain
    - Be too hot
  - I might
    - Run out of gas
    - Have better things to do
- I needed a better approach
- I decided to work in chunks where
  - Each chunk
    - is complete and has value
    - stands alone
  - There is a natural priority
  - I have the freedom to do it "all at once" or over several days



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The lot my house is on is approximately 160 feet wide by 120 feet deep. I have a large front yard, large side yard, and a reasonable back yard. I mow it with a push mower, not a riding mower. All in all, with edging, sweeping, and mowing the entire job takes about 3 hours.

But, unless I plan well, the full bore three hours approach is risky. It is an all or nothing approach. Along the Texas gulf coast, three hours is a long enough time that a number of things can get in the way: family plans, how much gas I have on hand, the weather, the heat, the batteries for my MP3 player. More times than not, I won't have three hours to get this done. I'll have less. And since I can't do the work any faster than it takes, I need to find a better way, I need to come up with a way that allows me to work in chunks, where each chunk is complete and has value.

The most important chunk is the front yard, that's what everyone sees when they drive up to the house. If I mow nothing else, I mow the front yard (see section 1 on the slide).

Since the side yard is large, I break it up into smaller sections. There's a small section of the side yard that flanks our driveway and appears to be part of the front yard, so I mow that section second. If all I do is sections 1 and 2, then the front of the house looks good.

The third section is the front side yard. Mowing this makes the house look good from any direction down the street.

The fourth section is the back side yard. There's also a section that runs behind our fence that I mow about once a month (if I get to it before my neighbor does). Finally, there's the back yard. I save it for last because I can mow that when I get home from work, or on another day. If I have the energy, the time and the weather permits, I mow it on the same day I mow everything else. Otherwise, I save it for another time.

I sectioned things out so no matter the situation I could get something meaningful done. Work is the same way. When we work in small meaningful chunks we have the best chance to get something started and finished. To really make this approach work we need to break our work based off the situation, the total size of the problem, and what the current priorities are.

## Putting the pieces together

- What happens if you focus on only one lesson?
  - Do what works all the time
    - Eventually you answer questions you already know the answer to
  - Everyone wants to go MAD
    - Yes, but we are not always willing
  - Don't work in the dark
    - Feedback becomes more important than the work
  - Make it better
    - Do you know enough to make it better?
- How the four lessons interact
  - If you make it better
    - You probably discovered something that should be done all the time
    - You won't waste time on activities that don't provide lasting and meaningful value
      - Do what works all the time
  - If you don't work in the dark
    - Rarely will you be surprised
    - You will make steady, predictable progress
    - You will do what works all the time
      - As it is those activities that light up the darkness
  - You will make it better
- Look for opportunities to combine lessons
  - Focus on one
  - But consider how the other lessons will help

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Wisdom can always be misapplied, misused or misconstrued. At the beginning of this presentation I said that lessons can be misused and when that happens, harm will almost assuredly occur.

If you only focus on one lesson, even with good intentions, there is greater opportunity to cause harm. If you focus only on "Do what works all the time" you may end up answering questions you already know the answer to. The main advantage of this lesson is to get answers to challenging questions and we assure that by focusing only on key activities or activities that hurt. But if we only focus on "do what works all the time" we may focus on activities that don't bring additional value.

Focusing only on "Everyone wants to go MAD" seems like a safe bet. What harm could come from that? Sometimes people are not willing to use their talent or skills. We need to look deeper in those situations, and the easiest way to do that is to apply more than one lesson.

Focusing only on "Don't work in the dark" can lead to a fixation on feedback, to the extent the feedback is more important than the work. This is the situation where the checklist is more important than the work the checklist is supposedly confirming.

Focusing only on "Make it better" assumes you know how to make it better. What do you do if you don't?

The interesting thing is that using two or more lessons guarantees an appropriate balance and assures no harm.

If you make it better ask "Is this something we should do all the time?" If you make it better, you won't waste time on activities that don't provide real value. How could such activities "make it better?"

If you don't work in the dark surprises will be rare, progress will be steady and predictable and you will do what works all the time. Activities that work all the time light up the darkness, they help provide useful and meaningful feedback. Finally, if you don't work in the dark you will make it better, because you know enough about the situation to see clearly and make it better.