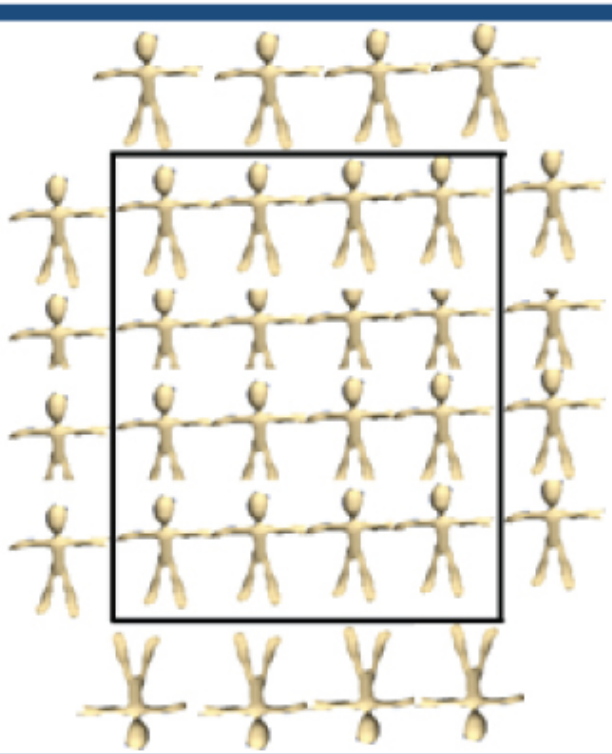
The Apprentice *and* the Project Manager



Lessons for Developing an Agile Mindset

Kamal Manglani

“The Apprentice and the Project Manager” Book Excerpt

Lessons for Developing an Agile Mindset

By Kamal Manglani

BOOK EXCERPT Table of Contents

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NOTE: **This is the Table of Contents (TOC) from the book for your reference. The eBook TOC (below) differs in page count from the tradebook TOC.**

Introduction

The chapters that follow are about the experiences of an apprentice in an auto workshop, who learns the various types of optimizations, and expands them to be applied in his corporate job. They are similar to what is defined as Lean IT, though currently called an Agile mindset, and essentially are short, iterative cycles of work in order to change Behavior to focus on outcomes (not just outputs), and to continue on the path, until there is significant value compared to the costs of the outcome.

It is easy to spot physical excess in our environment. We have optimized ways to manage these wastes with the use of full scale systems. Imagine if the litter in your city was not removed for a month. This would pose a serious problem. There is huge amount of waste in software development, and until we develop an intuitive mindset to gather awareness, we will never be able to manage it all. This will eventually cause companies to slowly turn into non-high-performing ones.

The apprentice is hired to help out at an auto shop that is severely constrained in terms of resources. However, once

a mindset shift is seeded, the auto shop uses the same constraints as strategic levers to develop with unprecedented growth. These are simple practices that can be adapted overnight, as long as the right seeds have been planted in our organizations for mindset shift.

Short cycles are important to measure, observe, and reflect the behaviors causing the measures to go positive or negative. If we have long periods of work cycles without sufficient reflections, it becomes even more difficult to measure, and thus, the behavior shift never happens or is very difficult.

Behavior shift is necessary to make a habit of winning. Companies will only develop such a habit if they learn quickly from failures.

At the beginning of each chapter is a simple Tweet. Please tweet the sentence if you want to share the message with more minds. At the end of each chapter is a brief lesson covering the material learned.

Each chapter is split in two time periods. One is the teenage years where the main central character is an apprentice in an auto shop. Then follows the present years,

where he transitions to a Project Manager in the IT department of a candy company, and gradually makes his way up to senior executive levels.

Chapter 1

The Auto Apprentice & the Project Manager

***Tweet:** Failure is imminent, but it's important to learn from mistakes in order to succeed sooner. @ApprenticePM*

During my teenage years, I had the opportunity to be both an apprentice and manager at a local auto workshop. The workshop was in a neighborhood among many others providing the exact same services on cars or other automobiles. Every day, the technicians would show up in the morning at eight and work until seven in the evening. They were paid a fixed wage, and some of them chose to work overtime as needed.

A local businessman once had some car trouble on the freeway and brought his car to our garage. It took a total of three hours for the car to be fixed (it was a unique piece of machinery and first of its kind, given it had an advanced processor). During those three hours, I learned some of the most priceless lessons in feature negotiation and bug fixing that are missed greatly in software development.

Jack, our star technician, saw the car being pulled in and immediately worked his way towards it. He wished John, the driver, a good morning, and asked, “What seems to be the problem?”John replied, “Well, I’m here because the car is overheating, and the red light on my dashboard is lit up. I am not sure what that indicates.”

I started helping John with the paperwork and asked him to sit in the customer service area, which provided him a full view of the workshop. We had a dozen cars already, which was far above our hourly limit, but John was a long-time customer, providing us a steady line of business with all four of his family’s cars. Each hour, more cars came in; some were walk-ins, and others had scheduled maintenance appointments.

The garage could accommodate eight cars at any one time, and had five technicians that were professionals in different parts of the vehicle. One of the technicians was Jack, who was also training two recent hires, and they would occasionally seek his advice as they worked on a few models.

It was nine thirty in the morning, and John wanted to get to Cheeko by noon, which was 45 miles away. How long will it take to repair his car? Jack started the diagnosis and came back with a list of things that were wrong.

1. The light was on due to needing an oil change, which would take around 30 minutes and cost $80 for the premium oil.

2. Overheating was due to thermostat wear and tear and would need to be replaced. This would take at least two hours and be dependent on finding the right thermostat in the auto shop across the street. If it was not available, we would need to order it from another auto store five miles away, and it would take at least 45 minutes for it to be delivered. The associated costs would total $300.

3. In addition to this, Jack also noticed that the air conditioning was due for service. This would take 30 minutes to refill the cooling gas, but this was not an urgent problem. The costs would total $150.

4. One of the wiper blades was worn and no longer functioning properly. It would take 15 minutes to fix and cost about $20.

By the time this assessment was documented, five more cars had pulled into the garage with all sorts of issues. The total number of cars was 17 by 10 AM, and we hadn’t even fixed one car.

John, the driver of our first car, made the choice to just do the thermostat replacement, oil change, and wiper replacement. He then asked, “Can we start them in parallel?” Jack said, “No. Since we are changing the thermostat, we have a dependency for this to be completed before changing the oil. So you’ll need to wait between 2 hours and 45 minutes to 3 hours and 15 minutes.” John asked Jack to get started while he made a few calls to his business in Cheeko to let them know he would be running late *10* additional cars pulled into the driveway. There was no more available space in the waiting lot of the garage. Three of the cars were VIP customers and they all wanted Jack’s attention *now*. There was a total of 27 cars by 10:15 AM, and we had not even delivered the first car. Everyone wanted triage with an exact amount of time it would take to fix their cars. This was also day one on the job for me, and the atmosphere in the workshop by 10:30 AM was complete chaos.

Mike, a senior manager at the workshop, called his elder brother, Stan, who was on call to provide additional support for such days. Luckily, Stan was available and would be at the workshop in 30 minutes. By the time Stan arrived, we had *32* cars in the queue and only two completed.

Chapter

3 The Journey to a Positive “NO”

***Tweet:* It is better to say NO to one client than to risk losing your entire business by taking on too much work. @ApprenticePM**

One of the earliest lessons I learned from working with Stan that I remember was, “If you have to say NO and know that the consequences are going to be bad, then find someone else to say NO for you.” That someone is usually the customer themselves.

So we had carryover from yesterday and more to be queued today. How were we going to fix this problem? Stan had a simple solution: Let’s reserve 40% of our capacity for pre-booked work that is by appointment, and 40% as a drive in without appointment. The remaining 20% would be reserved to improve our daily flow to make us even more productive.

Jack asked Stan, “Now why would the customers take an appointment before coming to us rather than just go to another car workshop?” Stan smiled and replied, “We will assure the customer in and out times for standard services.

In addition to this, we will give them a stop discount of 10% on any spare parts we may use. This can be written off. If the customers still choose to come here without an appointment, then we can provide them express service for 20% increase in cost for things that can be done through appointments. This will only work if we provide excellent service for our customers whose appointments are within two days of their calling. We can also hire a driver to pick up and drop off the cars booked by appointment, a service which our customers would love. It is very difficult to say NO to a customer once he has already arrived at the workshop then if he is on the phone, where you can give him a more meaningful answer along with NO."

It is very difficult to say NO to a customer once he has already arrived at the workshop then if he is on the phone, where you can give him a more meaningful answer along with NO.

Steve jumped in and said, "This will not only help us book appointments, but also predict demand up front, so we can order spare parts or have them on standby before time." It was a win-win for everyone.

The team sat down and made five lots in the morning as reserved for booking, starting with the next week. As demand for reserved time grew, they would eventually

increase the reserved time boxes to 14 per day, based on all other capacity.

When the customer service started to market this new process, it worked from the beginning as the customers saved a lot of unnecessary wait time and loved the addition of 10% discount on parts.

In the present years, I thought of how I could use Stan's fundamental approach to my IT organization. Obviously, I could not ask my stakeholders to take appointments, nor did I have the authority to offer a 10% discount on software development. The problems were very similar, but the approach used in the auto workshop did not apply in the IT organization. I again sat down with Lynda to tell her the story of that experience, and she decided to give it a shot. We booked time for lunch the next day to go through different models that could give them the same outcome.

On my way back home, while waiting for my train to arrive, I realized a straight forward solution to my problem. I would need *classes* of service. Using trains as my example, I would need classes of trains with some that stopped at every stop, some with only two stops, and some that had four stops.

The next day, I explained to Lynda my observation, and we sat down to define the various classes of service that we would need to better the service of our own organization. We ended up with four classes:

Class Type	Description
Rapid delivery expected in 1 week or less on work packages that are small sized	Queue up this work for a rapid task force team that can quickly turn around on small sized high value work
Work package needing 2-4 weeks without infrastructure enhancements	Queue this work for enhancement teams who often rotate resource with rapid task force
Innovative work needed for growth	Queue work for consistent development teams defined at the beginning of the year
Infrastructure enhancements for holiday capacity	Define an active team round the year solely treating each day as a holiday and ensuring that we as an organization are ready every day, not just on holidays

There was one problem with the approach. What if the queue became extensive and the wait times exponential? Whether a train stopped at all stops or at limited ones, it was still the same size. So the size of the teams would need to be standardized in order to be predictable on the capacity. Secondly, we would need to identify the work in progress limit for each team, without which the entire purpose of improving focus would be lost.

Lynda and I identified the number of people needed per team, and observed in a limited wait time environment. The queue size was limited to two features, but any time the wait time increased, the queue size would increase, which would cause heightened alertness and we would act on limiting the wait time.

The portfolio management process, designed on service classes or queues, team capacity, or simply the number of teams and innovation, increased our productivity almost immediately. There was one problem though. After a few weeks of steady performance, our queue sizes and lead times started to increase again. Puzzled, Lynda and I started to recapture all statistics, and this is what it looked like:

About the Author

Kamal Manglani is an Agile practitioner and a thought leader in this space. His background is strong, hands-on, practitioner experience delivering cutting-edge technology products in fast-paced Fortune 500 companies. Kamal has successfully implemented Agile across global brands, from US to Europe and Indian Markets. He has pioneered and customized Agile practices within IT infrastructure, applying Lean Kanban principles. Kamal regularly coaches Agile to non-IT-functional areas such as HR and Finance.

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