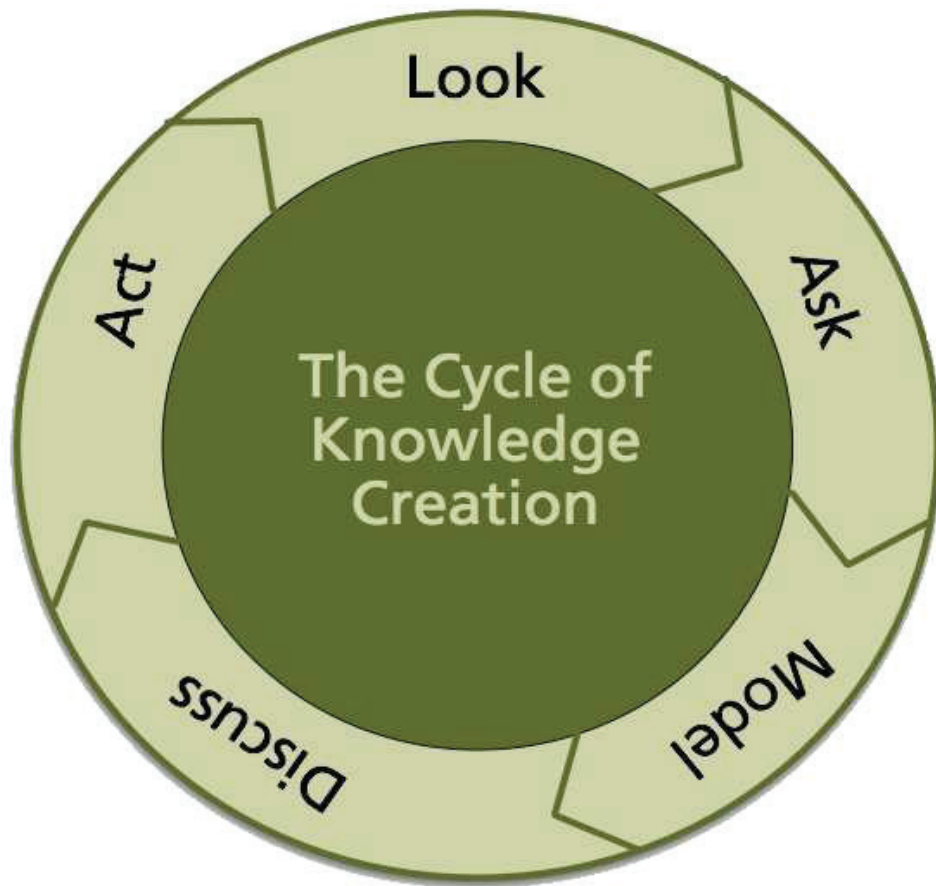


LAMDA:

PDCA for Knowledge Workers


By Katherine Radeka



LAMDA™

PDCA for Knowledge Workers

Key Takeaways



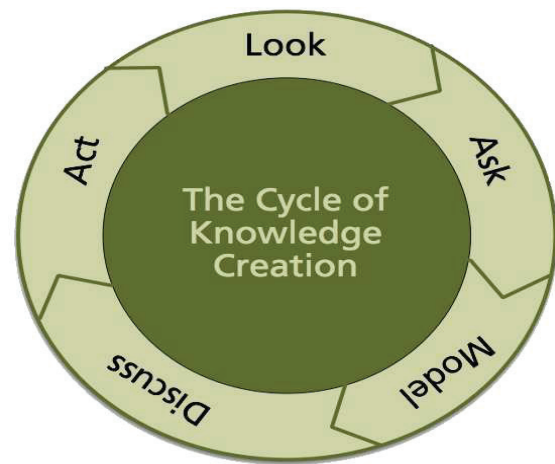
- LAMDA is a form of the Plan-Do-Check-Act cycle of continuous improvement.
- LAMDA defines the actions that take place in the Plan and Check steps of PDCA:
Look, Ask, Model and Discuss.
- It corrects for the Western tendency to skimp on planning and move quickly to action.

What is LAMDA?

LAMDA is the cycle of knowledge creation. Dr. Allen C. Ward created the LAMDA cycle to correct a problem that he observed frequently when U.S. engineers attempted to use Plan-Do-Check-Act. He saw this pattern:

plan-DO-check-**ACT**.

We needed a lot more guidance about the Plan and Check stages of the cycle. People are also often confused about the difference between Do and Act. LAMDA corrects the first one with explicit steps to follow, and eliminates the second.



Look: "Go And See"

The purpose of the Look step is to ensure that we have the best possible information to solve a problem. We need both the explicit knowledge we can find in reports, and the tacit knowledge - the knowledge that comes from first-hand experience. Too often, we have only explicit knowledge, and don't take time to take a look at things for ourselves. Our corporate climate may even discourage us from visiting the manufacturing floor, or getting our hands dirty. However, we miss the opportunity for valuable insights when we get all of our information secondhand.

Ask: Ask "Why?" and "Who?"

After we have gathered our own impressions, we have two questions that need answers: why is this happening? and who may know something useful? We answer the Why? question with tools such as causal analysis, fishbone diagrams or five whys. We answer the Who? question with research: Who has seen this problem before? Who has solved this problem before? Who are the experts?

Model: Develop Models to Visualize Knowledge

In the Model step, we take our knowledge from the Look and Ask steps and make it visible to others. Diagrams, charts, simple tables, architecture drawings, scale models, sketches and storyboards are all ways to visualize knowledge. These models facilitate rich discussion by helping to ensure that all sides in a discussion have the same picture in mind as they seek solutions to the problem.

LAMDA and PDCA			
One PDCA cycle = two LAMDA cycles.			
Plan	Look	Check	Look
	Ask		Ask
	Model		Model
	Discuss		Discuss
Do	Act	Act	Act

Discuss:

We discuss our models with three sets of people: those impacted by the solution, the experts we identified in Ask who have seen this before, and the person who will make the final decision about the actions we will take. As we go through these rounds of discussion, we build shared understanding about the problem and the solution. As the discussions come to a conclusion, we recommend a course of action we will take, and put together an implementation plan. At the very end of this phase, we make our decision.

Act:

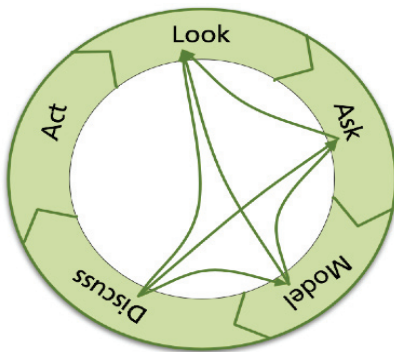
We take action on our decision and follow through on the implementation plan.

Look Again:

We review the results, and check them against our expectations. Then we may kick off a new LAMDA cycle to address any issues or make further improvements.

Real World LAMDA: Looping Back

In the real world, a LAMDA cycle rarely proceeds sequentially. We learn something in the Model step that takes us back for more Looking. We Discuss our models with someone, who suggests another way to Ask why? We may make several loops between Model and Discuss, as each conversation clarifies our model. Each of these loopbacks deepens our understanding until we have enough information to decide how to Act.



Rather than wait until the Models are perfectly polished, it is best to move forward and get Discussion going early with rough models. The discussion will refine the model of the problem, and develop models for potential solutions. Further discussions refine those models until we have a solid recommendation.

LAMDA cycles move from Look-Ask-Model-Discuss to Act when the path forward is clear, and the decision-maker is satisfied with the depth of understanding, and the recommendation. For an urgent, small problem, a full LAMDA cycle can take less than an hour. A more complex problem make take weeks, and kick off smaller LAMDA cycles to answer specific questions.

Real World LAMDA: Nested LAMDA Cycles

A large problem may require lots of smaller LAMDA cycles to solve it. We may need to run an experiment to test our hypothesis about a root cause, or run a simulation to test out a recommendation.

A large LAMDA cycle, "What mix of products will meet our growth targets for 2009?" may kick off many small cycles to answer questions like, "How can we get customer input into the design process early?" and "What technological advances will lead to the next boost in performance?"

Next Step

How could you apply the LAMDA cycle to a problem you are trying to solve right now? How would you Look? Who would you Ask, and how would you Ask Why? What type of Model could you create? Who would you Discuss this with?

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