



Stage-Gate[®] – the origin, status quo and its future

Interview with Prof. Robert G. Cooper, December 2013

Stage-Gate will have its 30th birthday soon. A good occasion to ask, where Stage-Gate comes from, what is its role and status today and whether there is a future for this system. You cannot find a better person to be asked these questions than the inventor of the Stage-Gate system: Prof. Robert G. Cooper.

Five is: Bob, Stage-Gate was “invented” by you in the mid-1980s as a road-map for conceiving, developing and launching new products. Tell me about the very beginning of Stage-Gate. How did you come up with this system?

Bob: *I started observing project teams in major firms as they developed bold new products and services and drove them to market successfully. Some of the projects (and project teams) I studied included a new milk packaging system from DuPont, a new generation of turbo-jet aircraft engines for commuter aircraft from United Technologies, a new telephone system from a major communication company, and many other ‘big idea’ innovation projects.*

The research was much like video-taping a football team as they drove the ball down the field to score a goal. If you watch enough winning football teams do this, eventually you learn what it takes to be a winning team yourself and how to score lots of goals. And that’s how Stage-Gate was born: it’s the integration of these best practices – the methods, approaches, and key actions from idea-to-launch – based on some very successful project teams.

Five is: Based on the results of your research you “designed” the Stage-Gate process. Was it difficult to convince the first organizations to follow your process?

Bob: *When I was about to publish the results of my research, I sent advance copies to a few knowledgeable people I knew for their feedback. One sent the article back to me immediately with five words scrolled across page 1: “Right on! Let’s do it!” He was a senior exec at Exxon, and that was one of my first major installations of Stage-Gate. And DuPont followed quite quickly in much the same way. I really didn’t have to convince people at all to try Stage-Gate – once they saw the logic and simplicity of the system, they were sold.*

Five is: Has Stage-Gate changed since those early days?

Many companies improved the process, and so Stage-Gate evolved over the years. In addition, we did further studies (e.g. NewProd) identifying many success drivers – why new products win. This research looked at hundreds of new products – some successes, others failures - and so we figured out what separated the winners from the losers. Then I built these new success drivers into the Stage-Gate system. In this way, through the 1990s and into this century, Stage-Gate got better and better with each evolution or addition of a success driver. Thus, according to an AC Nielsen study in 2010, a rigorous stage-and-gate system increases company sales performance from new products by a factor of 6.5 times. Not surprisingly, by the year 2000, almost 75% of product developers in the USA were using this stage-and-gate system.



Five is: What about Europe?

Stage-Gate was also introduced into Europe in the mid-1990s, first in Scandinavia and later in German-speaking countries. Now a high percentage of leading firms across northern Europe use Stage-Gate or something very similar to it, and are reaping the benefits of an effective and efficient idea-to-launch system

Five is: You mentioned that the Stage-Gate System has been improved over time. What have been the most remarkable changes?

Bob: Stage-Gate has evolved from beginning. In the early days, we learned that one process does not fit all different kinds of projects. Once I was confronted by a frustrated researcher who claimed: "Your process is killing my project! I'm required to deliver a business case now, but I still have no idea what application the substance I am working on is for." His was a technology development project – fundamental science – not a new product project. So we made Stage-Gate more flexible by developing different versions such as XPress, Lite or TD (for platform and technology development projects).

Another major step was to add a more tactical and strategic multi-project steering dimension. Tools as portfolio management, including Strategic Buckets, made Stage-Gate a holistic system, looking at all projects together.

We also began to emphasize the quality of the ideas that enter the Stage-Gate system. Elements as voice of customer research, spiral or iterative development, sharp definition of the value proposition, open innovation or design thinking have been integrated into the modern Stage-Gate systems.

Most success factors we identified in our early studies stayed the same, but their impact changed over time. Company and innovation culture, for example, plays a much more important role today.

Five is: Apropos of state-of-the-art, many companies in the German-speaking area call Stage-Gate the basic system for new product development. But it seems to have lost some excitement and seems a bit outdated. What is your opinion about this?

Bob: I see many companies struggling with "old" Stage-Gate systems. With all these changes of Stage-Gate I just mentioned, it was and still is crucial for companies to update their Stage-Gate systems every 3 to 4 years. If this does not happen or the state-of-the-art Stage-Gate system is not implemented properly, the people affected (e.g. project leaders, gate keepers, etc.) are right to criticize their system.

But there are still criticisms of Stage-Gate that persist, for example, it's not adaptive enough and does not encourage experimentation – which means it is good for product improvement and renovation projects, but not for the real big, game-changing innovations. And for the current state-of-the-art Stage-Gate system those critics are partly right.

Five is: This sounds like there will be more changes and optimization in Stage-Gate over the next years. What will be beyond today's Stage-Gate system?

Bob: A handful of leading firms are rethinking and re-inventing their idea-to-launch system; so let's have a look at what they're doing:

The newly designed systems look a lot like the traditional process – there are still stages where work gets done, and there are still gates where decisions are made. But the details of the process and how it



functions are adapted to the different needs faced today: The picture emerges of a more agile, vibrant, dynamic, flexible, leaner, faster, adaptive and risk-based gating process ... a Triple A system:

- *Adaptable and flexible: this means the system incorporates spiral or iterative development – getting something in front of customer early and often – experimenting – through a series of build-test-and-revise iterations.*
- *Agile: Elements of Agile Development, borrowed from software development, are built into the next-gen system. For example, the notion of sprints and scrums – short time-boxed increments.*
- *Accelerated: Projects in the next-gen system are properly resourced, especially major projects – a dedicated cross-functional team – for maximum speed to market. Activities within stages overlap, and even stages overlap: the notion of a “stage” is less relevant in the new system.*

The Stage-Gate system of tomorrow must incorporate this Triple A approach in order that companies continue to be successful at product innovation in these ever-changing and challenging times.

Five is: Thank you very much for these insights!

About Prof. Robert G. Cooper

Dr. Robert G. Cooper is one of the most influential innovation thought leaders in the business world today. He pioneered the original research that led to many groundbreaking discoveries including the Stage-Gate® Idea-to-Launch process. He has published more than 120 academic articles and seven books, including the best selling ‘Winning at New Products’. Cooper is President of the Product Development Institute Inc., ISBM Distinguished Research Fellow at Pennsylvania State University’s Smeal College of Business Administration, USA, and Professor Emeritus, DeGroote School of Business, McMaster University, Hamilton, Ontario, Canada.

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