At the PDMA 2105 Annual Conference, we presented our ideas on an alternative approach to the traditional phased and gated process. We call our approach Exploratory PD® (ExPD). ExPD is an adaptive approach that identifies and drives down project risks that can result in product failure. It adapts to the changing nuances of each project, while eliminating unnecessary activities and paperwork. This approach translates into speed. ExPD is a product development system that is better suited to today’s complex, ever-changing environment.

The world has changed but product development processes have not. It’s common knowledge that globalization and faster rates of change have created greater competition, bigger and varied markets, and new technologies.
Virtually every company feels pressure to develop innovative products and get those products to market faster. Unfortunately, traditional product development (PD) processes based on phases and gates are too slow and cumbersome to deliver the necessary speed and innovation.

Phased and gated processes work well in a stable world where customer needs are known and unchanging, technologies are mature and well understood, and product development projects are similar. This stability allows definition of activities and deliverables in a standard process. Products can be defined with unchanging requirements. Project plans can be developed with detailed scope, budget and schedule.

But we are not living in a stable world. We see symptoms of a breakdown, including unsuccessful products, surprises during development resulting in rework and delay, overwhelming bureaucracy, performing tasks just because they are required on a deliverable, people feeling overloaded and people working on too many projects.

**EXPLORATORY PD** IS A NEW APPROACH

ExPD is a new mindset for the complex world we operate in. As we will explain, key concepts of ExPD include identifying and driving down risk as well as adapting the process to fit the unique nuances of each project. To produce these outcomes, we incorporate several new and important concepts: Lean, identifying and testing assumptions, fast iteration, fast customer feedback and adapting to changes in the environment.

First, let us offer an analogy to explain ExPD, and then we will get into more detail.

**Traditional product development is to a road atlas as ExPD is to Waze.**

Before mobile phone apps, if we were to travel from Los Angeles to Anaheim, California, we’d get a road atlas or map to plan our trip (see Figure 1). We’d identify what looks like a good route and estimate how long the trip should take. Once on the road, we might encounter delays such as traffic jams or road construction. We could try to change our route to avoid the delays, but we would not know the conditions on the other roads. As a result, it’s difficult to alter the route as we encounter delays.

Traditional PD does extensive planning up front. Defining the product requirements and specifications early allows us to identify and schedule activities. Budget, scope and schedule are fixed and tracked. That’s OK when the world is stable and traffic is moving along as expected. But, when you hit an unexpected traffic jam, like a change in regulations, or a technology problem, the phased and gated process cannot easily adapt.

ExPD, on the other hand, does handle change well. It continually adapts based on changing project needs, just as Waze continuously monitors your route to identify delays and provide adjustments accordingly. Waze does this by collecting information from other drivers already ahead of you on your route. It uses this real-time information to predict changes to your arrival time, assess other options and redirect you as necessary (see Figure 2). Also, if you deviate from the route because of unexpected obstacles, Waze adapts to find the best route based on your new position.

The ExPD approach adapts your route—your process steps—based on what you learn and events that unfold. ExPD monitors sources of uncertainty and project risk and determines which are most important. The project team focuses on understanding and driving down important risks, which improves project success.

**EXPD IS A SYSTEM**

We treat product development as a system, incorporating a strategic
framework, an idea pipeline, a portfolio management system and a product development process. The system is supported by an appropriate infrastructure, including the organizational design, culture, tools, metrics, technology and market understanding. For purposes of this article, we will focus on the ExPD process.

There are several key principles behind the ExPD process:

1. Identifying, evaluating, prioritizing and resolving key assumptions, uncertainties and risks directly impact the success of a new product. We will just use the term “assumptions” going forward because we find uncertainties and risks can be reworded as assumptions, which makes tracking and resolving easier. The ExPD process uses assumptions to drive the process. The most important assumptions are addressed as soon as possible, enabling kill-quickly decisions, eliminating future surprises and improving product success. The focus is on what can kill a project as opposed to justifying continuing the project. We developed a tool called the “assumptions tracker” for this purpose.

2. Assumptions are not limited to project risks, commercial success and technical success. For example, we identified and evaluated crucial assumptions related to the business model. We developed a tool in our soon released book called the “Business Fit Framework” for this purpose.

3. As assumptions are resolved, we are learning new information, which impacts subsequent activities. ExPD is an iterative process of multiple “resolve loops,” each resolve loop incorporating learning and feedback that drives down risk. There are many ways to resolve assumptions, and we developed a tool called “reduce, eliminate, accept and prevent” (REAP) to help the project team classify and prioritize assumptions.

4. While handling assumptions we must also make progress on maturing and developing the new product idea. We developed a new tool called the “Concept Maturity Model” that acts as a beacon for the product development team.

5. Overloading resources is one of the surest ways to plug up the product development system, hinder speed to market and waste resources. We developed the concept of the “Prioritization Valve” that manages the release of projects into the system and maintains appropriate levels of capacity utilization.

THE THREE SEGMENTS OF EXPD

The three segments of the ExPD process are sub-systems because they operate on different types of elements yet they interact in important ways (see Figure 3).

Segment 1: Strategy
The purpose of this segment is to establish a guide for making decisions about which products, markets and technologies to pursue. The s2m Strategic Framework consists of three pillars: enterprise, business unit and product development, which represent the levels of analysis in this segment (see Figure 4). The three pillars integrate with the execution elements of pipeline, process and portfolio.

Segment 2: Ideas and Select
The purpose of this segment is to generate and collect product ideas
and to select the best product ideas to pursue in the next segment. We evaluated individual ideas and compared them against each other. The strategic framework (see Figure 5) provides guidance on what kinds of ideas to pursue and how to evaluate them.

Ideas can enter the system serendipitously or from the roadmap. Ideas on the roadmap will proceed through the process with fewer obstacles due to the preceding strategy work.

The purpose of the prioritization valve (PV1) is to ensure the correct number and kinds of resources are available prior to assigning work to the project teams.

The purpose of the prioritization valve (PV1) is to ensure the correct number and kinds of resources are available prior to assigning work to the project teams.

**Segment 3: Explore and Create**

The purpose of this segment is to create a successful new product while reducing the risk of failure and improving time to market (see Figure 6). The unit of analysis is a single project.

Investigate focuses on three major components:

1. Focus on understanding the project, in particular what could kill the project, what we need to learn and what resources we need. Activities include identification, evaluation and prioritization of assumptions.

2. PV2 evaluates which individual projects to pursue in the resolve loop and in what order. Proper management of resources through planned release of projects to the resolve loop is crucial.

3. The resolve loop is where the project team determines the most important assumptions, while developing and launching the product. The resolve loop quickly gathers important feedback in four steps: design, build, execute and learn. Resolve loops are iterative and can operate in parallel.

**BENEFITS OF EXPD**

The overall benefit of using ExPD is adaptability to the complex and ever-changing environment of product development. Other benefits include:

- Speed
- Strategic alignment
- Risks reduction
- Products that start with the customer
- Real-time project prioritization
- Learning fast from key uncertainties and killing projects quickly
- Decreased bureaucracy and paperwork
- Better decision-making through team empowerment

More information is available in our [whitepaper](http://www.exploratorypd.com) or go to [www.exploratorypd.com](http://www.exploratorypd.com).

**REFERENCES**

1. Waze is a community-based traffic and navigation app. [http://www.waze.com](http://www.waze.com)

[Mary Drotar](http://www.exploratorypd.com) is a partner and cofounder of Strategy 2 Market, a boutique product development consulting firm. Her specialties include process, organization, teams and culture. Drotar has an MBA from the University of Chicago.

[Contact Mary >](http://www.exploratorypd.com)

[Hey](http://www.exploratorypd.com) is a partner and cofounder of Strategy 2 Market. Her specialties include strategy, portfolio management and customer understanding. Morrissey has an MBA from the University of Chicago.

[Contact Kathy >](http://www.exploratorypd.com)