on roadmaps and roadmapping

by Steve Johnson, the tech industry's product marketing storyteller
Product and portfolio roadmaps are key deliverables in any product planning process. A roadmap looks beyond what you’re doing now. It explores not where you’ll be soon but where you could be a year or more down the road.
When my kids were young and still in car seats, my family would drive from Dallas to Virginia for holidays with my family. As you know, America is a big place! The trip from my home to my parents’ home was 24 hours of driving.

Here’s the route from Dallas to our home near Washington, DC: we started on Interstate 30, going to Little Rock, Arkansas and merged to I-40. We took I-40 all the way to Nashville and stayed overnight with my friend Frank. (If you’re ever in Nashville, be sure to shop at Hart Hardware and tell Frank I sent you). From Nashville, we continued on I-40 until we connected to I-81 in Bristol, Tennessee. From there, it was a straight shot to Strasburg, Virginia where we connected to I-66 and drove into the DC area.

So, while it’s a long, long trip, it’s really an easy route. And that’s our roadmap.

When describing it to friends and family, I told them the highlights—30 to 40, to 81, to 66. Texas to Arkansas to Tennessee to Virginia—and avoided too much detail. They don’t need to know where we’re stopping for lunch and we can’t know exactly what time we’ll arrive at Frank’s but it’ll be as close to dinner time as I can make it. But hey, if we’re an hour early or an hour late, Frank will understand.

Before you embark on a long trip—or a long development project—be clear on the goals with a rough idea of the logical steps.
Executives, sales people, and marketing leaders are often frustrated with the short-term focus in product management, particularly those using agile development methods. Leaders have no idea what is planned—if anything—beyond the next two-week sprint. And that’s why they ask for a roadmap.

What’s a roadmap? It’s an 18 to 24 month view of the major sets of functionality that are planned for a product or a portfolio of products.

A portfolio roadmap has become the preferred way to show delivery plans over time. It’s not just a desired feature list by month; it’s bigger than that. It describes major blocks of work, not a laundry list of features.

Yet only 15% of organizations worldwide have deployed multi-year product strategies and less than half of these organizations admit to having done so effectively. Additionally, 20% of organizations reported relying primarily on tactical product roadmaps as the primary vehicle to align with their company’s business strategy. (See “The Study of Product Team Performance” from Actuation Consulting.)

I was helping a team of product managers prioritize their plans using product roadmaps. We were talking about themes and markets and financial returns; we were examining how various strategic elements could filter the items that were selected for the roadmap. One product manager finally complained, “But when are we going to get to the roadmap.” He wasn’t interested in how items were selected; he was only interested in having a graphical depiction.
Obviously I’d failed to convey that roadmapping comes before the roadmap.

Roadmapping is a technique for strategic planning; the roadmap is a key artifact showing current plans.

In fact, some people use the term “roadmap” when they really mean something else. Not every document with a timeline is a roadmap. And some executives ask for a roadmap when they really want a project briefing.

One team was asked to present the roadmap to the executive team to answer these questions: What projects are you working on? When will they hit the market? What revenues can we expect? Instead of showing projects on a timeline, the product leader chose to show each project’s alignment with company strategy compared to expected return-on-investment. And called it a roadmap.

Ultimately, you’ll want a roadmap showing major features planned for the next 3 to 6 months and any new initiatives over the next 3 to 6 quarters. Don’t let these get confused. The first is a “gonna” list; the second is a “wanna” list.

There are two ways to build a roadmap. Most agile teams reverse-engineer the roadmap from their list of user stories. And this bottom-up approach can work. You look at the personas and problems described by all the user stories and look for common themes. Then group similar capabilities together, get a rough sizing, and plot it on a timeline.

A better approach is top-down. Look at big ideas—often huge ideas—and spread them across time. You can see that this has to happen before that. Then for each, you break those down into the user stories that deliver on that capability.

A roadmap example

I can envision the roadmap for my favorite online travel tool: TripIt. If you travel a lot, you should totally check it out. But here’s the gist: Forward the confirmation emails for your flights, hotels, and cars to TripIt. They’ll collate it all into a coherent,
chronological itinerary that you can view and manage online or from your phone. Need a confirmation number at check-in? Need to know which hotel you booked? Which car agency did you use? It’s all right there in TripIt.

Obviously, TripIt couldn’t deliver all this goodness is one release. They needed to get a basic product out into the market and start building a following. New capabilities rolled out every few months.

Here’s how I saw it:

1. Integrate confirmations via email from the most common travel services such as airlines, hotels, and rental cars
2. Friends network: see who’s near when traveling
3. Admin support: create itineraries for others
4. Share trips via calendars
5. iPhone app
6. Android app
7. Real-time status updates
8. Social media (tell people where you are)
9. Point tracker (track frequent flyer miles & hotel points in one place)

If you look at this list, you can see that each item is a project by itself. A quick estimate from a development leader will tell you roughly how many months each project will be. Now you’ve got a roadmap. Some items may have been done in parallel by different groups but they could just as easily have been done one after the other, which is why sequencing into a roadmap is so critical.

Developing your roadmap

Our goal is to define the major sets of work, sequence them in a way that makes sense to the customer and the business as well as balance the effort over time. You’re not trying to do a project plan here but it’s obvious that you don’t want to attempt 20 person-months of work in one quarter with only 5 person-months in the next.

You’re probably using Excel for your backlog or roadmapping tool. If so, you’ll want to have these fields in your spreadsheet:
- Name of idea or feature (or whatever you call a set of work)
- Effort (a qualitative value of effort by the product team)
- Release assignment (either a release number or date)
- Release theme (optional)

With these fields, you can easily build a pivot table like the one shown here.

Of course, each of these items needs to be reduced to the many, many features, user stories, and tasks necessary to make the idea a reality. But without a vision for 12 to 18 months, agile teams can keep building feature after feature.

**Without a roadmap, agile teams are in danger of building the wrong thing faster than ever before.**

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I’ve always been impressed at the virtual overnight success of Marriott Courtyard. In the late 70s/early 80s, Marriott noticed a surge in female guests—women traveling alone. At that time, many women were moving into sales jobs and customer implementation jobs; they were traveling for work. So Marriott interviewed these women to see how their traveling requirements were different from those of men who traveled for work and how they differed from women who traveled with family.

Think about it for a second. What do you think those requirements were?

What new capabilities are required?

The number one issue with women, as you probably guessed, was security. So Marriott designed around safety... in particular, offering limited access to the sleeping rooms. And I read somewhere the name “Courtyard” was chosen specifically because of its safety connotations.

And what can you eliminate?

If travelers have a rental car and mostly work at the client site, you can eliminate the concierge, meeting rooms, catering, and a fancy restaurant—all de facto standards that a hotel “must have” according to industry leaders. Take a look at the value of various hotel amenities for traveling business people and compare these values to what’s delivered by full-service hotels versus low-end motels.

For this buyer persona, it’s clear that hotels are over-performing in areas that are not valued and low-cost motels are under-performing in areas that are valued. Courtyard focused on those areas that are valued and
dramatically reduced or eliminated in areas that aren’t valued.

*Blue Ocean Strategy* (W. Chan Kim and Renee Mauborgne) argues that you can identify which de facto standards for the industry are out of sync with the buyer’s value. But is their “value curve” idea a predictive tool or an evaluation tool?

**Want to try?**

I put together a simple spreadsheet. Download my value-assessment template and try to determine the ideal value curve for your products. Of course to make it a relevant exercise, you’ll really have to know your customers and what they value.

![Hotel amenities for business travelers](image)
Estimating is perhaps the biggest challenge facing product and marketing managers regarding product and portfolio roadmaps. Obviously you want to get an estimate before anyone spends too much time designing a solution but you can’t really get a valid estimate without some level of design.

**Here’s the big trick: guess.**

A guess is good enough for this level of planning. For roadmapping you don’t need a person-hour estimate; you just need an idea of whether it’s a month or a year, tiny or huge. Experienced teams find they can quickly and easily estimate roadmap items by fiscal quarters. This item will take one quarter; that one will take three quarters.

Unfortunately, a lot of product leaders and company leaders expect precision in these estimates much too soon. Postpone this level of detail until your team has a chance to examine the idea further and get more specific in terms of effort.

And remember: an estimate is a guess, not a commitment. Assure your teams that sizing estimates are not date commitments. If they said it might take a quarter, assure them that you are not committing them to delivering it *this* quarter. At best, estimates are “no-sooner-than dates.” An item estimated at two quarters will be available no-sooner-than two quarters from when we begin.

**Estimating relative effort is the key**

Rather than estimating in months and quarters, most teams are more comfortable—and more accurate—when estimating size: *this* is bigger than *that*. A little bigger or a lot bigger.
I like assigning a relative number to estimates so that you can more effectively compare dissimilar things. But be careful with numbers. Before you know it, some fool (maybe you!) will try to equate these effort numbers with person-weeks or -months, and create an atmosphere of distrust between the development team and the rest of the company.

Your teams probably have history estimating user stories; they can use the same techniques with epics and roadmap items.

Agile teams generally use the Fibonacci numbering scheme for estimating. Fibonacci numbering uses the sum of the prior two numbers to create the next number in the sequence, like this:

**Fibonacci:** 1, 2, 3, 5, 8, 13, 21, 34, 55

Estimating using a Fibonacci sequence means that each estimate level is as big as the prior two levels combined.

But Fibonacci is not the only way to estimate. It's fairly common for agile teams to use “shirt sizes” for the first, rough estimation. This feature is small; that feature is large. You can assign numbers with shirt sizes using a scheme like this:

**Doubles:** Tiny: 1, Small: 2, Medium: 4, Large: 8, Huge: 16

This “Doubles” method shows that each level of effort is twice as large as the prior one. So “small” is twice as big as “tiny;” “medium” is twice as big as “small.” Another way of thinking about it is you can do two “tiny” things for the same effort as one “small” thing.
For a more dramatic escalation curve, some teams prefer the “Squares” method:

Squares: $1^2$: 1, $2^2$: 4, $3^2$: 9, $4^2$: 16, $5^2$: 25.

In this scheme, “small” is four times bigger than “tiny” and “medium” is more than twice as big as “small”.

Here’s the thing: The actual values don’t really matter as much as the relative values. It turns out that people cannot accurately estimate time but they can estimate relative effort. It’s difficult to say “this will take 2 months” but it’s easy to say “this is larger than that.”

**Estimating is a team effort**

So bring your team together, discuss the various items you have planned for the roadmap, and get their estimates.

By the way, it’s been proven that team estimates are more accurate than an estimate from one person. Three people on a team is good; five is even better. When there’s a discrepancy, you’ll want to get those who estimated highest and lowest to explain their reasoning. Maybe they’ve seen something or assumed something that the others haven’t. Explaining this point of view may cause the team to re-estimate with the new assumptions.

This approach for assessing the effort for a roadmap item, a user story, or an epic is known as “planning poker.” Read more about this method of estimating at [www.planningpoker.com](http://www.planningpoker.com) from Mountain Goat Software.

One last tip: Before you start an estimating exercise, I recommend you begin with a benchmark. Choose an item or two that your team has already completed—one that you know the time and effort it really took—and then compare new items against that benchmark.
Teresa Torres of ProductTalk adds:

A great way to get better at these guesses over time is to be sure to track how long things actually take and compare them to your estimates. Understanding why a guess was wrong also helps you get better at estimating similar projects in the future.

So whatever your method—time in quarters or relative effort—you'll want an estimate of size for each roadmap item. It will help you ensure that you're not over-committing your team.
Whether you’ve built your roadmap up from a set of features, or down from a set of strategic initiatives, you want to get buy-in across the organization. Here’s a simple technique.

A roadmap begins with ideas—sometimes large epics or themes and sometimes just a laundry list of features and user stories. Likely you’ll have assessments of the importance of each idea to the business and to your target customers. You probably have some estimates of sizing too.

You stick all that in a spreadsheet, move some stuff around, and then present your roadmap to various internal audiences. And whap! you get smacked in the face. “Where the feature for my top customer?” “What about cloud?” “I thought the new infrastructure was going to be next!”

I’m sure we’ve all had occasions where colleagues questioned the roadmap priorities or worse, supported them strongly during the team meeting but then complained bitterly about them immediately afterwards. In some cases sharing your roadmap internally is a no-win scenario but more often, not getting support for the roadmap results from not getting buy-in from the people who sell and support your product. They cannot see how you came up with your list and why you chose to put one thing in front of another.

So here’s a technique to align your roadmap with internal priorities.
Show them your process.

Start by reminding everyone that there are more ideas than you can deliver; you just can’t have everything you want, given the resources available. So you’ll have to choose. And you’re trying to choose using a formula instead of using your opinions and the opinions of others.

Explain the different factors you use when you’re prioritizing the roadmap: impact to customer, number or percentage of customers affected, revenue and cost estimates, strategic initiatives, and so on. Explain the formulas. You want them discussing the factors and the weights, not complaining about individual items. You want them to buy into the columns, not the rows. Once they see a method in your approach, they’re more inclined to support it.

But let’s take it further. Ask representatives from each team to say “yay or nay” to each item on the roadmap.

Add a section to the roadmap for internal buy-in with a column for each organizational group.

Each group can say whether that item is critical for their group or their customers.

In this example, it’s clear that the first feature is important to almost everyone. Further down you can see the sales and marketing teams are big on the social media integrations while the post-sales groups want real-time status updates and point tracker. The leadership team seems to want everything so that
doesn’t really help much (although I guess it makes them feel better.)

Some facilitators choose to limit the number of votes per operational area. In this example, there are 11 items in the list; give each team 5 or 6 votes and see what happens. Like the game of musical chairs where there’s always one chair fewer than the number of children playing, this approach prevents people from choosing everything and really forces them to prioritize.

I’ve found that people are more inclined to support something when they’ve had the chance to define it or at least contribute to its definition.

But wait. Who’s missing?

That’s right. Customers are missing.

You could use this same approach at your next customer meeting. Or use a voting tool like UserVoice to expand it to more groups. You could choose to add a column for overall customer votes but it’d be better if you added a column for each target market segment or persona. Then you can see that Japan and Korea want these capabilities while Western Europe wants a different set. Or the needs of financial services compared to manufacturing.

Jellybeans and fishbowls

I used a similar technique with my customers using jellybeans and fishbowls. We had many big initiatives—more than we could do—and no clear strategic direction from inside the company. So I held a customer advisory board meeting of a dozen customers.

At the side of the room I had a dozen fishbowls, each labeled with the name of one initiative. I gave each company a bag of 50 jellybeans and asked them to vote. Some were very careful, putting 7 beans...
here and 17 beans there, but one customer (our most vocal) threw his entire bag of jellybeans into one fishbowl, saying “I can’t keep using your product if you don’t complete this!” This “jellybean and fishbowl” method is simple; it’s easy to explain and it doesn’t cost much.

Ideally you want to create a prioritization scheme that makes sense to both colleagues and customers, and one that doesn’t rely on too much technology.

**Want buy-in for your roadmap?**
Solicit feedback and insights from your customers and colleagues and then show them the math.
A product or portfolio roadmap is a key tool in planning, looking beyond your current product deliverables to months and years ahead. But a roadmap can also be a helpful tool with sales people, prospects, and customers.

I once saw a presentation with a clever logic diagram for sharing the roadmap:

- Do you want to delay your sale? If yes, then show the roadmap.
- Do you want to delay the next release? If yes, then show the roadmap.
- Anything else? Don’t show the roadmap.

Some companies simply do not share roadmaps. They want you to buy what they have now. They don’t want you to defer your purchase waiting for the “next big thing.”

But many companies, particularly startups, find sharing the roadmap is a great way to promote and validate their innovation plans. Obviously you cannot do everything at once so a roadmap shows your market that you’re thinking beyond the current development iterations.

Existing customers want to know where you’re going so they can make their own plans. Which technologies and major capabilities can they expect this year and next? How will changes in your architecture affect their
own plans? The same is true for potential clients; they want to see you’re in sync with their plans.

Because Apple is particularly closed-mouthed about future plans, journalists, bloggers, and analysts try to guess, as shown in this example from KGI Securities analyst Ming-Chi Kuo. (I like the logos on the left, don’t you? And I can just see Apple’s sales people saying, “Hmmm, iPhone 5s shows in the beginning of 3Q, so that’s sometime in May, right?”) Even if you don’t share your plans, others will guess what you’re planning.

A roadmap isn’t a substitute for delivery. Many times, sales teams are frustrated by the slow pace of development so they sell “futures” hoping to persuade clients to buy now instead of waiting. They sell the roadmap as a commitment, not a plan. A roadmap, just like a sales forecast, is a plan that will likely change.

However, be very cautious of guarantees. Plans change; commitments change; market conditions change. And resources get reallocated. So the more your colleagues and your clients think the roadmap is committed, the more frustration you cause for product management, development, sales and marketing.

Most product leaders ultimately conclude the need for two roadmaps: one for internal use, shared with executives and development teams, and the other for external use, shared with sales people, analysts, and
clients. The internal roadmap has more detail and more specific dates; the external roadmap offers major themes spread across quarters or half-years.

Even more ambiguous is the “now and later” roadmap. In this example from ProdPad, the “roadmap” reveals current projects, near-term projects, and future projects. (No dates. Nice!)

The likelihood of change increases as plans move beyond the current set of work. Agile teams can be fairly confident in what’s in the current iteration or sprint, and perhaps the next few iterations, but next year? Who knows? But for your current plans to have any meaning, you have to know where you’re going with a rough idea of how you’re going to get there.

The roadmap is a planning tool that blocks out the next 18 to 36 months. Give a summary in some form to your external audiences so they can see your plans. Or you’ll find your colleagues and customers making stuff up (and that won’t be good!).
Chapter 2

What's next?

O-mikuji (御御籤, 御神籤) are fortunes or wishes written on strips of paper at Shinto shrines and Buddhist temples in Japan. What’s your wish?
The roadmapping process pulls together ideas from inside and outside your organization. Roadmaps are the result. Involve leaders inside your company to ensure buy-in.

You’ll want to have a working version with lots of detail but you’ll need a sanitized version for public consumption.
Chapter 3

About me

“I have come to believe that most organizations need a small number of living documents, usually fewer than 10.” — Steve Johnson

Speaking at ProductCamp in Toronto
Steve Johnson is the tech industry's storyteller and a recognized thought-leader on product management, marketing, and sales enablement.

Steve is a popular keynote speaker at technology forums and author of many articles on product management and marketing.

Steve has been working within the high-technology arena since 1981 with experience in technical, sales, and marketing management positions at companies specializing in enterprise and desktop hardware and software. His market and technical savvy allowed him to rise rapidly through the ranks from Product Manager to Chief Marketing Officer. In his various technical marketing roles, he has launched 22 product offerings.

Prior to founding Under10 Consulting, Steve was an instructor for 15 years at Pragmatic Marketing, a training firm focused on software product management. He was one of the first bloggers on software product management, and in his tenure at Pragmatic published more than 1,500 posts from 2002 to 2012. His e-book on software product management has been downloaded more than 100,000 times.

Steve draws heavily on his marketing and sales experience in both direct and multi-tier distribution, while his quick wit adds an element of fun to his workshops and speeches.