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Product Development 2.0

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Abstract: Web 2.0 principles will not only revolutionize the web experience, the design pattern and the business models of software companies. They can indeed be applied to a lot of industries for new approaches to product development. The web can be used to put users in control and co-create better and richer products in a reduced timeframe.

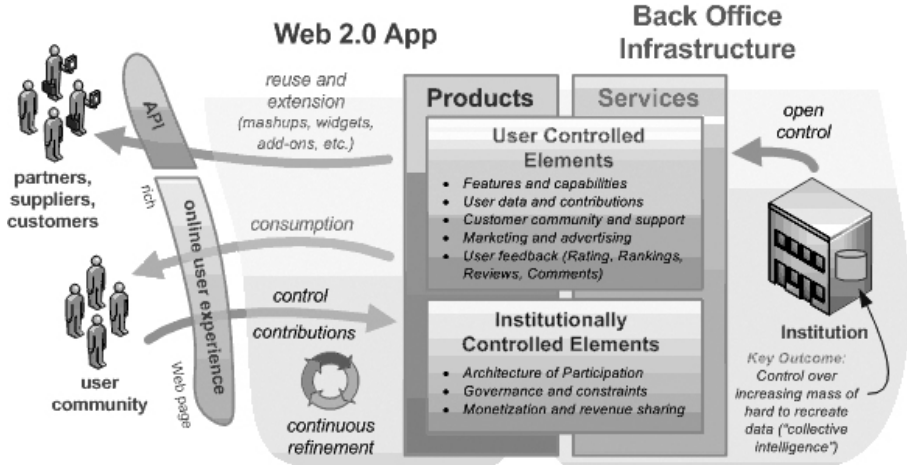
Key words: web 2.0, user generated, product development and web as a platform.

While the window on using the "2.0" suffix is probably closing, it is still worthwhile exploring an especially significant trend in 2006 that is likely to see much more widespread uptake in 2007. Specifically, I'm talking about building highly competitive online products by turning over non-essential control to users directly via the Web. For now, I'm calling this online business trend "Product Development 2.0", a concept that embodies the use of Web 2.0 concepts such as harnessing collective intelligence, users as co-creators, and turning applications into platforms - three of the most powerful techniques in the Web 2.0 arsenal.

What is Product Development 2.0 exactly? It's an informal term applied to something that online startups and traditional businesses both are increasingly doing, namely leveraging mass user contributions, providing open architectures for others to build on as they like, and even handing control over key product decisions directly to users. The reasoning behind doing this is simple: satisfied customers have always been essential to having the most successful business, both online and offline. But how best can you ensure that customers get exactly what they want from you, as customized and quickly as possible?

This is where the scale, new tools, and business models of Web 2.0 have stepped in, giving the potential to provide customers with better, rich products, much more quickly, and with more of what they want. Taken as a whole, it's increasingly clear that there are new business models afoot that are just now being well understood.

Product development 2.0:
using the Web to put users in control and co-create better, richer products faster



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Given that any business typically is vastly outnumbered by its customers and potential customers, putting a bureaucratic, centralized product development team into the critical path of product creation and ongoing maintenance highlights how little a company can actually serve them, especially in an individualized way. And with everyone online, it's increasingly obvious where the biggest source of talent, engagement, innovation, agility, and worker bandwidth really lies: with customers.

Using the techniques and technologies that have emerged in just the last few years, a company can now finally give them the tools and motivation to tweak, tune, refine, and contribute to its products and services. And increasingly, they'll probably do it. YouTube is still currently one of the best examples of user co-development of a world-class product in its pure form (65,000+ videos uploaded by users per day), but sites like eBay, Slashdot, and many others have been leveraging their users in product development for a long time now. As it turns out, Product Development 2.0 is not a small topic and starts off with collecting explicit user contributions, leveraging the Database of Intentions, and putting in automated real-time feedback loops to identify the best or most popular new content or capabilities for other users that come along later.

It's important to note that it's a fundamental shift for a business to turn over a large part of its product development to its users, becoming more of a

mediator and facilitator than a product creator or owner. This is the shift of control from institutions to individuals that the apparently relentlessly democratizing force of the Web has begun exerting on the business models of organizations of every description around the world.

As more organizations figure out how to apply Product Development 2.0 to their individual offerings, they will reap significant competitive advantage over those not harnessing the Web to directly connect to customers and begin a rapid and never-ending innovation cycle. This is another aspect of the perpetual beta concept that reflects the fact that increasingly, products and services online are never finished, and indeed, can't ever be finished as changes and additions seamlessly pour in over thousands of millions of internet connections.

But enough about the possibilities. Let's talk some examples, both in terms of what older style product development did *versus* what this new style is doing. Like the recently discussed Programming 2.0 concept - a set of software development tools, techniques, and attitudes that is, not incidentally, enabling much of this - and the original Web 2.0 definition, it is examples in lieu of principles that is one of the best ways to paint a picture of what appears to be happening in the evolution of product development (see table below).

It's worth noting a couple of key points about the table above. One is that the web makes the shift of control possible by putting every business in direct contact with every one of its customers. No small system can remain unchanged by sustained contact with a much larger system, and this means that any business (which is the small system in this scenario) which embraces its customers over the web in a two-way fashion is likely to undergo a move fairly quickly from the first column to the second. The fact is, if you have loyal customers who like the products and services that you offer online, you're going to have a hard time avoiding the shift of control and opening up of your product designs and architecture.

The second point is that those that play to the strengths of the web as a platform, instead of trying to fight it, can exploit the most powerful software platform, or indeed, platform of any kind, that has been created to date. Triggering network effects, building an extensible platform out of the product offerings (whether it's an online software application or an insurance company doesn't matter), and a business can see the advantage to be had in the assymmetric model of business on the web; all of the potential is on the edge of our networks now (where the users are) instead of the middle.

The Move to Product Development 2.0

	<i>Product Development 1.0</i>	<i>Product Development 2.0</i>
Primary Customer Interaction Channel	Telephone, Mail, Face-to-Face, One Way Media (Print, TV, Radio, etc.), e-mail	World Wide Web, e-mail, IM
Source of Innovation	Organizations	Customers
Innovation Cycle	Months, Years	Minutes, Hours, Days, Weeks
Content Creators	Internal Producers	External Producers
Feedback Mechanisms	Market research, satisfaction surveys, complaints, focus groups	Analytics, online requests, user contributed changes
Feedback Mechanisms	Market research, satisfaction surveys, complaints, focus groups	Analytics, online requests, user contributed changes
Product Development Process	Upfront design	Less upfront, much more emergent
Product Architecture	Closed, not designed for easy extension or reuse by others; walled garden	Open, very easy to extend, refine, change and add on to, ecosystem friendly, designed (and legal) for widespread remixing and mashups
Product Development Culture	Hierarchical, centralized, Not Invented Here, somewhat collaborative, expert-driven	Egalitarian, decentralized, remix instead of reinvent, highly collaborative, Wisdom of Crowds
Product Testing	Internal, dedicated test groups, hand-picked select customers	Users as testers
Customer Support	Customer Service	User Community
Product Promotion	One-Way Marketing and Advertising	Viral propagation, explicit leveraging of network effects, word of mouth, user generated and other two-way advertising
Business Model	Product Sales, Customer Service and Support Fees, Service Access Charges, Servicing High Demand Products	Advertising, Subscriptions, Product Sales, Servicing All Product Niches (The Long Tail), Unintended Uses
Customer Relationship	External Buyer (Consumer)	Partner and -- increasingly remunerated -- Supplier (Consumers as Producers)
Product Ownership	Institution, particularly executive management and shareholders	Entire User Community
Partnering Process	Formal, explicit, infrequent, mediated	Ad hoc, thousands of partners online, disintermediated
Product Development and Integration Tools	Heavyweight, formal, complex, expensive, time-consuming, enterprise-oriented	Lightweight, informal, simple, free, fast, consumer-oriented
Competitive Advantage	Superior products, legal barriers to entry (IP protections), brand name advantage, price, popularity, distribution channel agreements	#1 or #2 market leader, leveraging crowdsourcing effectively, mass customization, control over hard-to-create data, end-user sense of ownership, popularity, cost-effective customer self-service, audience size, best-of-breed architectures of participation

And waiting too long to enter the Product Development 2.0 arena potentially means waiting for competitors to get their ahead. The longer a business wait to get the clock started on collected the Database of Intentions (continuously turning 100% of all customer interaction into enriching your product dynamically), the more likely it will face competitive dislocation and even lock-out. Amazon is famous for collecting user contributions to enrich their product database and they are about a decade ahead of potential competitors of in terms of the enriched, hard-to-recreate database they have built.

Now on to a few examples to highlight what companies are actually doing that has many of the elements of Product Development 2.0. Firstly, the usual preamble about checklists of features; just like Web 2.0, one doesn't have to implement every one of these in order to deliver better results, just the ones that apply in your situation.

So let's look at a couple of stories of companies that are going part of the way down the Product Development 2.0 path and getting valuable early experience. I selected real-world companies since that's the majority of companies that have to figure out whether they're going to play in this space or let others do it for them.

■ Product Development 2.0 examples

XM Radio is a satellite radio provider that has recently embraced some of the tenets of Product Development 2.0. Compellingly, the Top 20 on 20 channel is one of the most popular channels XM has yet created. Why? Because control of it has been entirely handed over to its users. According to the Wikipedia entry on Top 20 on 20:

"The channel plays everything new from rock to rap, with the songs chosen by online votes to the XM website. One can also vote their favorite songs by calling the station number, or text messaging. The channel is completely automated by listener voting with no DJ interruption. Top 20 on 20 is also one of the most popular music channels on XM. According to XM's internal research, the channel achieves 1.8 million listeners a week."

Although the channel was relaunched with some changes in December 2006 that have proven unpopular to many (less music, live DJs), it presents the cautionary tale of what happens when you assert bureaucratic authority

over something that you've co-developed with your users; the possibility that you'll kill the goose that lays the golden eggs of user contribution and engagement.

General Motors conducted its highly innovative Chevy Apprentice campaign early last year and made quite a demonstration of convincing users by the thousands to generate online video commercials for its new Chevy Tahoe SUV. By opening up the contest to anyone on the web and only screening submissions for truly objectionable content, they were able to elicit a stunning 22,000 user generated commercials exhibiting an impressive variety of creativity with both positive and negative messages. From the beginning of the effort, they realized that in a freeform environment created by Web 2.0 tools, they would only be able to respond to criticism and not control the message. As expected, environmentalists famously picked up the tools to create ads savaging SUVs in general, but GM's Ed Peper understood that only by engaging in conversation instead of censoring dissent could they gain trust and get more information into people's hands than they could otherwise.

Ultimately, GM created its own ads that highlighted the high amount of recycled parts and the best fuel-efficiency in its class of the Tahoe. A brave piece of Product Development 2.0 for sure and one that many traditional business followers probably viewed incredulously as GM truly let their customers and potential customers co-create their advertising campaign with them on the world stage. (For the curious: many Chevy Apprentice commercials are still up on YouTube).

■ The potential for disruption and opportunity

The web is a fundamentally different platform from any platform we've seen before. Unlike previous general-purpose platforms, the web is fundamentally communications-oriented instead of computing-oriented. Sure, computing still happens but what the web does that's so important is its ability to connect information and people together.

The hyperlink is the intrinsic unit of thought on the web. So, it's information connected by links instead of programs that operate on data, that's the basic difference. But why does this hold the potential to put traditional product development on its head and usher in Product Development 2.0? Firstly, because the aforementioned information can now

truly be generated by anyone; and secondly, because we are all almost universally connected to this new medium by the devices on our desktops, in our briefcases and in our pockets.

All of us can now be directly and continuously connected to the products and services which we need, which increasingly, is the rest of us and not a handful of large companies. The very best companies in the future are likely to be those that will create innovative new ways to facilitate innovation and collaboration by the hundreds of millions of us that can be reached and embraced by effective architectures of participation. The big winners will enable us and encourage us to take control, contribute, shape, and direct the designs of the products and services that we in turn consume.

The good news: only a few industry leaders and early adopters fully appreciate the significance of these trends as yet or even how to fully exploit and monetize them. There's still enormous opportunity, and for existing businesses with large investments in existing business models, blowing your business model up before someone else does will be the order of the day. This will prove though very hard for most to do successfully; and therein lies the potential for significant industry disruption in the next 5 years as new players with core competency in Product Development 2.0 push older, slow-to-adapt businesses off the stage.