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Service Innovation™

# The National Instruments Developer Exchange The Adaptive Organization™ at Work

## National Instruments

- A rapidly growing company with \$391 million revenue in 2002
- Flagship product: LabVIEW, a test and measurement suite pioneering virtual instrumentation
- Open support for all customers

## The Challenge

- Broad community of highly technical, sophisticated, and demanding customers
- One-to-one support incidents expensive, not leveraged

## What They Did

- Created the Developer Exchange, a forum for peer support
- Encouraged and recognized Enthusiasts, customers who deliver high-value support
- Backstopped expert users with application engineers who publicly answer unresolved questions

## The Results

- 40% of incidents are now submitted to the Developer Exchange rather than traditional service channels
- Over 40% of those are answered by expert users

## Complex Technology and Applications

National Instruments (NI) is leading a new way of test and measurement. Called "virtual instrumentation," NI and its flagship LabVIEW product suite serve a broad and diverse family of scientists and engineers in the aerospace, automotive, life sciences, communications, electronics, and semiconductor businesses.

As different as they are in their specific applications of NI solutions, their customers do have some things in common. They are highly technical. They're experts in their application domain. They rely on NI equipment for critical parts of their job. And when they need help, they want it fast and accurate. Like many support organizations' customers, their expectations are high.

Recognizing how critical high-quality technical support is to the value of the products it sells, National Instruments offered open support to all customers. Any current NI customer could get help by calling or submitting an incident on the ni.com web site. This resulted in a satisfied customer community, but increasing pressure on the support organization.

National Instruments had an insight: why not treat expert users not as the problem, but as the solution?

## Making Customers Part of the Solution

As technical communities generally do, NI customers had formed online exchanges—a "listserv" (mailing list) about ten years ago, and Usenet newsgroups in 1999. These communities were active and useful, but were limited by their lack of connection with NI and by legacy technology. So, in February of 2001, National Instruments partnered with the Usenet newsgroups to form a NI-supported forum: the Developer Exchange.

Use of the forums has increased steadily since their inception, with 1500 to 2000 questions now resolved per month. National Instruments drives traffic to the Developer Exchange through an ongoing awareness campaign. Application engineers encourage their customers to visit the site, NI staff demo the forums at

customer conferences, and the Developer Exchange gets top billing on the "Request Support" section of NI.com. But, as with all other healthy communities, growth comes from within as users have successful peer support experiences. These success stories drive repeat usage, result in recommendations, and even encourage users to become Enthusiasts.

## Key Benefits

- Peer support model reduces traditional support incidents
- Resolving issues publicly creates a great support repository with almost no extra work
- Customer base handles tough application questions requiring a broad range of domain expertise

As a result of this growth, a full 40% of the incidents submitted for resolution now come through the Developer Exchange rather than traditional one-to-one support, and the NI team is looking to drive that number as high as 60%. NI has achieved dramatic business results by removing the barriers between the company and its customers, trusting its customers to be full partners in support.

## Fostering Enthusiasts

National Instruments calls its most productive community contributors "Enthusiasts," and the term fits. After answering at least 25 customer questions—resolutions that would have cost tens or even hundreds of dollars each through traditional channels—their posts are marked with a special icon highlighting their special position in the community. They can post information about themselves on the website, further cementing their relationship with the community.

Participants' reputations emerge as a natural result of their contributions to the community, both in volume and quality. Feedback on contributed content helps users find the likely most valuable information while creating incentives for contributors to provide the highest quality content they can. On a rotating



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basis, the NI team recognizes Enthusiasts on their website who have made interesting and significant contributions.

Unlike traditional “compensation in/effort out” models of human resources, the Developer Exchange shows that recognition and achievement are powerful motivators. Expert users outside of NI answer over 40% of all questions posted to the Developer Exchange, including those requiring deep product and domain expertise. NI doesn’t pay them; they answer questions to help out, to enhance their reputation, and for recognition from NI and their peers.

#### Supporting Customers in Public

Beyond the most obvious benefits of peer support in driving down incident volumes, the NI team has identified a second benefit: what they call the “web math” of helping customers in public. For every customer whose problem is solved in the Developer Exchange—whether by a customer or an NI team member—who knows how many customers never had the problem because they read about it and took action to avoid it? Or how many solved the problem based on the posted resolution? Although these avoided incidents are hard to measure, NI executives estimate that ten times the number of cases solved in the forums are avoided—high leverage indeed.

National Instruments contrasts this multiplicative effect with the standard support model. If the same customer comes in with the same question and the same support engineer solves it privately, no one will benefit without an explicit knowledge capture process. NI views the Developer Exchange as a “great repository that requires zero maintenance: if the content is there and is readable, people will find it.”

#### The Adaptive Organization at Work

The members of the Consortium for Service Innovation have developed a model called the Adaptive Organization, and the National Instruments Developer Exchange is a great example of key Adaptive Organization principles.

# The National Instruments Developer Exchange The Adaptive Organization™ at Work

Before	After
Complex problems required one-on-one support from NI staff	Issues can be answered in the Developer Exchange by expert users outside NI
Support was offered in the context of NI	Support is offered in the context of the user
Resolutions were private and weren't directly available to Application Engineers or customers	Resolutions are immediately available to all engineers and customers, avoiding problems and deflecting incidents
Customers were recipients of support	Customers are trusted “partners” in support
Customers working in related domains couldn't easily find fellow experts to discuss thorny issues	Experts can collaborate with other experts. A reputation model supports expert location and recognizes performance

Among them:

- **Connecting people to people and content by context.** The Developer Exchange is organized at a fairly fine-grained level around the products and application areas supported by NI products. This organizes all customer interaction around the user's context, but particularly searching for content and looking for the most appropriate experts and Enthusiasts. For example, searches can be limited to a particular product type, and the most productive Enthusiasts and other contributors for each topic area are listed based on their work on that particular topic.
- **Measuring objective and subjective feedback in an integrated way.** The reputation model implemented by the Developer Exchange is based on purely objective measures, such as the number of postings on a topic, as well as subjective feedback provided by users of content. This mix of measures is a cultural shift for many traditional managers, but is implemented quite naturally in a community where standard HR-style evaluation forms are an impossibility yet where people need to have help evaluating input from someone who may be a complete stranger.
- **Driving resource alignment through reputation.** In a community where knowledge is power, those with strong reputations get more of both. This creates an incentive structure that binds them more tightly into the community, and encourages more high-value contributions. Additionally,

National Instruments product managers can learn whose feedback to rate more highly in a particular area.

- **Aligning people's contributions to their preferred areas of knowledge, skill, and ability.** Business sage Peter Drucker notes that all knowledge workers are volunteers, but nowhere is that more literally true than in the case of an expert forum like the Developer Exchange. Because customers are engaging on their own terms, and because reputation encourages high-value contribution, community members naturally gravitate to the areas where they have the most interest and skill.
- **The environment supports a continuum of interaction types as appropriate.** National Instruments offers a broad range of support models of which the Developer Exchange is just one. If an issue involves company proprietary information, for example, forum postings can be quickly escalated into a traditional one-to-one exchange.

#### Applying Adaptive Organization Principles in Your Organization

National Instruments isn't alone in seeing these kinds of results from implementing AO. If you're interested in how Adaptive Organization can help your organization, contact us:



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