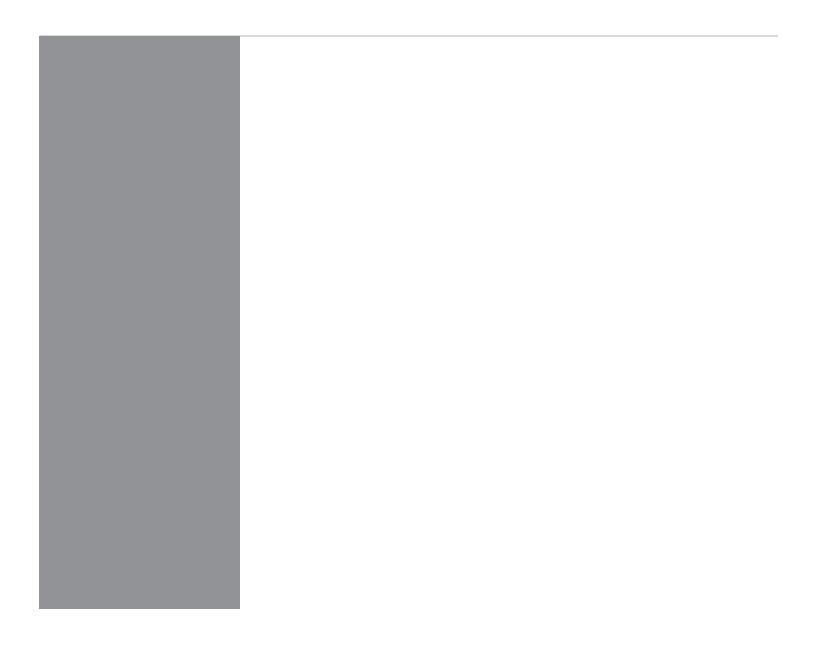




# The Business Case for Sencha Investment: An analysis of real-life customer ROI



## Introduction

Development teams tasked with delivering modern web and mobile applications face mounting pressure for faster delivery of a great user experience across a huge range of devices, all without sacrificing quality. The choices made on libraries, tools, frameworks and other foundational technologies to deliver these applications can have a significant impact on the business outcomes of an application investment. With the wide range of options available, it can be challenging to understand and capture not only the real upfront investment, but also the long term needs for application maintenance, enhancements and upgrades.

This paper investigates the value that customers have received from their decision to invest in Sencha's platform for web and mobile applications. We have used real-life examples to build a model that can be used by any development team to evaluate the cost/benefit analysis for their specific needs and environment. It is based on in-depth interviews investigating real-life experiences of ten Sencha customers and partners.

"We want to do things right and make fully educated choices where we minimize costs while achieving maximum value. We did a very detailed review of all options and Sencha was the solution that delivered."

These customers reported clearly measurable savings from their use of Sencha Ext JS, in addition to gaining a wide range of softer benefits. This paper describes the advantages these customers gained from using the Sencha platform and delivers a deep analysis of the most frequently reported areas of quantifiable savings including:

- The ROI of an integrated and supported platform
- The ROI of cross-browser development
- The ROI of cross-device development

This paper also considers other key benefits experienced by Sencha customers that are harder to quantify including professional support and services, faster time to market, excellent end-user experience, decreased developer frustration, and the reliability of a dedicated commercial vendor.

# Quantifying the ROI of Sencha Ext JS

Development organizations charged with delivering web and mobile enterprise applications have a clear responsibility to consider a wide range of business factors in their development decisions. Time-to-market, user experience, and quality requirements must be delivered within a reasonable and complete cost structure that includes development resources, software licensing, and other expenses. The goal of this paper is to identify the most straightforward approach to calculating the monetary impact of Sencha adoption in order to realistically evaluate the return on investment.

### PROJECT METHODOLOGY

Sencha commissioned Dimensional Research to interview customers who are actively using their solutions to obtain in-depth feedback on the actual value received. Dimensional Research conducted telephone interviews with ten Sencha customers and this report is a summary of those conversations.

Sencha secured the participation of customers for the interviews, then passed their contact information to Dimensional Research. Sencha did not participate in the interviews. Content in this report was taken from interview transcripts, although quotes have been edited for grammar and readability.

Participants were not compensated for participating in this research project, although as a token of appreciation for their time a donation was made to a charity of their choice. To encourage honest and unfiltered feedback, participants were ensured anonymity.

#### PARTICIPANT PROFILE

The ten participants were all responsible for web, mobile or kiosk applications and actively use Sencha as their platform for user interface development. All did think about value as part of their responsibility so we spoke primarily to development executives although actual job functions varied from CTOs through to engineers on the frontline. These customers represented software for a wide range of industries including financial services, retail, research, telecommunications, media, technology, and more. The end users of the applications included consumers, businesses, and internal employees. Feedback included seven individuals based in the United States and three in Europe.

"As a developer I'm an open-source guy. But as an executive my job is to provide a really amazing solution that has the best ROI. When I put on my business hat, Sencha is the right choice."

It should be mentioned that monetary savings are not the first thing that customers talk about when they discuss the value they receive from Sencha. It can be hard to put a clear dollar value on many important benefits cited including professional support and services, increased quality, faster time to market, excellent end-user experience, and the stability of a committed vendor.

That said, it is very easy to make a numbers-based case for Sencha Ext JS by focusing on the hard metrics that can be calculated, including the value of a fully supported solution, a single integrated platform, cross-browser development, and crossdevice development.

# 1. The ROI of an Integrated and Supported Platform

A significant part of the ROI of the Sencha platform comes from having a single, integrated, tested framework for all interface components. This delivers tremendous savings in developer manhours, particularly when compared to assembling and maintaining a custom open source solution which is the primary alternative to Sencha Ext JS. Without Sencha, a wide variety of components must be assembled to deliver all the functionality needed. Customers reported that they would have needed as many as 11 different and independent open source components to gain the equivalent functionality provided by Sencha Ext JS, including interface elements, view systems, logic, data handling, and server i/o. This has tremendous costs which customers avoided by using the pre-built capabilities in Sencha Ext JS.

"Every solution costs something, somewhere. You have to look at the project as a whole. The cost of Sencha licensing is almost irrelevant when you do that." Cost savings from using a single fully supported and tested platform solution are varied. At the most obvious level, it removes a huge level of overhead for custom framework development and maintenance efforts that are not unique to a particular business. This frees up in-house resources to focus on the specific business application needs which only they can do. And since the entire Sencha organization is focused on these components as their core business, they do a better job than any in-house team would.

"With Sencha we spend our time building the features our users are asking for, not dealing with the components of those features."

"Without Sencha we would have required a separate framework team to build and maintain the stuff that Sencha provides – and they would have had to be very senior people because this is hard to do."

"I would rather be training my team on a comprehensive framework with good documentation than having them write and maintain a bunch of custom code. First, it's less work, and second, the results are always better."

Using a collection of open-source tools does require additional work during development. First to find the appropriate components, and then to assemble a basic framework, plug in the appropriate additional tools and libraries, and make sure they all work together.

"We find when people come in they may know Angular better, but it's easier to get them productive with Sencha. There are many components that are ready to use and work together. If you know Angular, you often don't know Highchart or other stacks. With Sencha, there are many components which are comprehensive and ready to use." All customers in this project had stories of issues they faced when using open source components that they simply did not experience when using Sencha. Often the explanation of the issue was straightforward once it was understood, but it was very time consuming and frustrating for the teams that had to deal with these problems, and ultimately very expensive.

"Let me give you a real example. We felt good that Sencha was the right solution, but we wanted hard data. We needed to prove to ourselves what our actual costs were, so we picked a control and did the end-to-end development with both Sencha and open source. We recorded every part of the effort and time it took so we could measure the difference. We chose a grid with specific features we needed to conduct this test.

"The first thing with Sencha was that the grid was there. We found it immediately and it worked for us without any additional effort on our side.

"Then we did the same thing with open source. It took time to locate options and then check them out. We found something that mostly worked but it didn't quite have everything so we had to cobble something together. That took time. Then we plugged it in and it didn't work. There was a conflict because they used the same name as something in our code so we had to fix it, which was another 20 hours when we had to dig into the code and figure out what was happening. The same type of thing happened a couple of times – little stuff, but everything takes time to figure out and can be pretty frustrating for the developer dealing with it.

"Overall, with Sencha we ended up saving over 100 hours in the creation and maintenance of this one component. Multiply that over all the components and all the years that an application will be used, and there is just no contest. Sencha is the measurably better value."

#### Development Executive Large Financial Services Company United States

The impact of these additional efforts when working with open source is consistently very high. Sencha customers who took the time to measure the effort compared to other approaches consistently were able to complete projects significantly faster, although exact development time savings did vary.

"The development time using Sencha is very fast. It's faster than anything else. When the team is developing with Sencha **they can do twice as much or more** compared to when they are developing with open source. The speed of development is the main argument for using Sencha here."

#### WHEN IS OPEN-SOURCE A GOOD ALTERNATIVE?

The Sencha customers who participated in this project are not opposed to open-source solutions. However, they did emphasize that each situation needed to be evaluated to understand the value. Many supported open source but found that Sencha was worth spending money on even if other commercial solutions in the technology stack were not.

"As an organization we promote open source, so if we choose a commercial platform we need to be absolutely sure that long term it will be beneficial. This was not an easy decision for us to make, but the facts spoke clearly."

Many Sencha customers happily use open source for their backend technologies such as MySQL, PHP, and so on. However, these individuals emphasized an important difference: they have full control over their back end environment. The complexity of the browsers, operating systems and devices that end users have makes open source a much more concerning option for client development.

"We don't have control over what devices are being used to access our stuff. We have to be ready for anything. That's not the same as the back end which we have full control over, so the open source discussion is not the same."

Even for client technologies, Sencha may not always be the right option. As shown in this paper, the value of Sencha is particularly strong when dealing with applications which require grids or charts to visualize complex data sets, when a team is geographically dispersed, when applications will be used for years, or when a wide variety of browsers and devices must be supported. For a simple web application with a short shelf-life, open source solutions may be a reasonable choice.

"The marketing team does these campaign web sites that are just text and images with simple forms. Then they throw them out after three months. That's the kind of scenario where Angular is a good fit." "If you use open source alternatives, there is a significant amount of custom development. You have to spend more time performance tuning and creating extensions. Sencha typically has that baked in – which is huge. We've found a Sencha team to be **50% more productive** than a team on Angular or some other framework."

"Development time is an important cost for us to consider. Compared to other frameworks not based on a component architecture **we saved 30-40% development time**."

The other area of significant cost savings is in avoiding ongoing maintenance of a home-grown framework. Every developer knows that a patch in one place can create a bug somewhere else. When dealing with a variety of open source solutions, it becomes your problem to fix those every time there is a change. With Sencha, the ongoing maintenance of the framework is done.

"Sencha is a full stack. With jQuery or Angular you end up with a dozen different technologies and you have to make sure they work together which is a nightmare. With Sencha you get the stores and the models and the components. It's so much easier which takes less developer time which saves significant dollars."

"If you've never done open source I suppose you think of the monetary cost of the license. But once you put a cost to how much it takes to support it yourself over time, it really is a no-brainer." Sencha customers emphasized the importance of the underlying architecture to the value they gained. Modern applications don't live in standalone bubbles, they interact with many other systems and maintenance efforts must take those other systems into account. Sencha's sophisticated architecture has many advantages. For example, the robust event queuing system includes a process that bubbles upwards through the containers. This enables applications to listen and take actions in child components. With this approach, multiple parts of an application can be updated using minimal lines of code, significantly less effort than requiring that all impacted parts be individually managed and updated.

#### "Sencha is really better architecturally."

For applications expected to have a long lifecycle, it is important that the code can be easily maintained over time. This is an important area of value in Sencha Ext JS. Sencha's design patterns are structured so everybody writes the same way. That means that no matter who picks up the code, they can more easily know what is going on than with other approaches, which is particularly valuable for distributed teams.

"Modularity of our applications matter to us. We are a research institute so people come and go frequently. We need to make sure that everything we write can be used by other people."

"The way that Sencha has a common use model and coding style across all components means that the next developer that joins the team can easily pick up what the last developer did." With so many areas of potential savings, customers typically evaluated ROI in terms of overall team productivity. The calculation used was this:

#### (Cost of initial development x Savings with Sencha) + (Annual maintenance costs x Savings with Sencha x Expected lifespan of application)

Actual efficiency gains reported by using Sencha ranged from about 30% to as much as double compared to an open-source approach depending on the application. It should be noted that these numbers look at the savings for an application that will run in one browser only. Multi-browser savings are discussed below. For example:

Development costs without Sencha	\$800,000
Development costs with Sencha (50% reduction)	\$400,000
Development savings with Sencha Ext JS	\$400,000
Annual maintenance and update without Sencha	\$50,000
Annual maintenance and update with Sencha (75% reduction)	\$12,500
Years of application use	5
Maintenance and update savings with Sencha Ext JS	\$187,500

Total savings for each application with Sencha Ext JS: \$587,500

### 2. The ROI of Cross-Browser Development

Cross-browser support has been a thorn in the flesh of web application teams since the days of Netscape and Internet Explorer. With even more browsers available today and older versions of browsers still being used, it can be a nightmare to manage the possible combinations of browsers, versions and OSes. While some internal environments do manage to limit the types and versions of browsers in use, any customer-facing application must support browser diversity, including legacy browsers.

"We get big savings from not having to deal with browsers. 99.99% of the time with Sencha if it works in Chrome, which is where we do our development, it will work in other browsers."

"I just joined the group working with Sencha out of a team that did Angular and JQuery. One of the big differences is that we don't have cross-browser issues on this team. Those used to be 10% of my bugs and now it's under a half percentage point."

"The cross-browser capability that comes out of the box with Sencha is really important. During the development effort we don't have to spend time testing that things work the same across all the platforms that we need to support."

As of the writing of this paper, Sencha supported 34 different browser types and is committed to supporting legacy browsers including older versions of Internet Explorer which continue to be widely used in large enterprises. All releases are fully tested on all browsers.

The savings from cross-browser development are fairly straightforward to calculate. Simply multiply the number of additional browsers needing support by the savings to support those browsers both during initial development and during ongoing updates. Next multiply the cost savings of each updates over the number of updates across the number of updates over the lifetime of the application.

#### (Development savings per browser x Number of additional browsers) + (Update savings per browser x Number of additional browsers x Number of updates per year x Number of years)

A typical Sencha customer can dramatically reduce initial development efforts and ongoing maintenance efforts for each application update, for each additional browser. For example, for an application that was required on 3 different major browsers with two updates per year the additional savings, beyond that gained from the benefits of an integrated platform, would be:

	Without Sencha	With Sencha	
Development costs for each extra browser	\$30,000	\$5,000	
Number of additional browsers	2	2	
Total cross-browser development costs	\$60,000	\$10,000	
Savings from initial cross-browser development with Sencha Ext J	S \$50	,000	
Update costs for each additional browser	\$20,000	\$5,000	
Number of additional browsers	2	2	
Updates per year	2	2	
Years of application use	5	5	
Update costs for additional browsers for lifetime of application	\$400,000	\$100,000	
Savings from ongoing cross-browser development with Sencha Ex	t JS \$300	0,000	

#### Total Savings for each application from Cross-Browser Development with Sencha: \$350,000

Sencha's approach can also reduce the required skillset in a development team. With Sencha, you don't write HTML, which is how they eliminate all the cross-browser issues. That means you don't need HTML expertise on your team as you do with open source solutions that work differently.

"If I use Angular, I need an HTML developer to write the markup plus someone to enrich with JavaScript. With Sencha, you don't need a specific team of HTML guys who optimize for each browser because the framework does it."

### 3. The ROI of Cross-Device Development

The ubiquity of mobile devices has given a wealth of options for businesses to support end users. Unfortunately, there can be significant additional cost and effort needed to support an application on all these possible environments. For customers that need to deploy on multiple devices, Sencha's approach of having a single universal application for desktop, web, and mobile devices yields a dramatic reduction in development and testing costs.

"The ability to do desktop and mobile in a single universal application made an easy business case even easier."

"Sencha's value is that we can deliver to lots of devices without needing to know the nuances. That's a big thing."

"We don't know what type of devices our customers will invest in. That's the nature of the beast when you're developing mobile. The only cost effective way to approach that is a hybrid solution, which Sencha does beautifully."

The savings from doing cross-device development with Sencha is particularly easy to calculate, since it is a simple matter of identifying the number of additional platforms to be supported. Usually this is slightly lower than the first platform as certain backend functionality and design efforts can be leveraged. Most typically a second native environment is about 80% of the costs of the first application development. This analysis should consider total cost and include all updates for the lifetime of the application – typically about two updates per year over a period of 4 or 5 years.

#### *Cost for development of each additional device platform x Number of additional platforms*

For a customer needing a new app on only iPhone and Android, the costs without Sencha would be the price of development on two platforms. Since Sencha requires development on only one platform, the savings are the cost of the second platform.

Lifetime cost for first platform	\$800,000
Cost of 2nd device native development (80%)	\$640,000
Number of additional platforms	1
Savings from Cross-Device	\$640,000
Development with Sencha	

Sencha customers did point out that you first have to answer the underlying question about whether a hybrid approach will meet the business needs of mobile users. Sometimes there is no choice but to do native development for each key platform, particularly when developing for consumer use. However, in the majority of cases a hybrid application does meet business requirements, in which case significant cost savings are seen.

"Any hybrid solution is not 100% the same as a native solution, and Sencha is no exception. So you have to ask if it's worth the effort to write the same application twice for the slight advantages of a native experience. We do have a few applications that we've done that but for most cases Sencha delivers even more than what we require for the user experience."

Another key benefit to Sencha's universal application approach is a much faster time-to-market as all devices supported can be delivered at the same time. One customer explained how they had an unexpected increase in demand for mobile after their first Sencha release. It was so successful that business demand for mobile capabilities increased, creating the good kind of problem that any development executive would prefer to deal with.

"Doing mobile with Sencha has been even better than our initial estimates because of the response from the business. They see we can deliver a great mobile app quickly so are proactively identifying more areas where we can deliver business value, which is the whole point."

# Bonus: The Non-Quantifiable Benefits of Sencha

Sencha customers reported they were easily able to demonstrate a substantial return on their Sencha investment with the key metrics discussed above. However, participants were consistently unwilling to limit the ROI discussion to a conversation just about the numbers. While our original line of questioning focused very specifically on hard ROI, the customers in this study went out of their way to emphasize the softer, qualitative benefits of using Sencha including:

- Professional support and services
- Faster time to market
- Excellent end-user experience
- Decreased developer frustration
- Stability of committed vendor

### Professional support and services

When discussing the value of a commercially licensed product compared to an open source solution, the first topic that comes up is the value of having a place to turn to when issues arise. When applications have issues, having a vendor behind you who has a dedicated and professional technical support team has tremendous value.

"Sencha is the only framework that has full commercial backing and is fully supported by the company that created it. If there is an issue, we have a well-defined trail back to somebody who is responsible."

"It's the nature of development that you run into weird bugs. We had a crazy one where we had a screen with two buttons, and when you clicked too fast the buttons would just disappear. We reached out to Sencha and had a patch within 30 minutes."

Sencha customers also discussed the value of access to a professional services organization with clear expertise, a managed community that was committed to replying to all participants, and excellent documentation.

"Having professional services support is a key value of Sencha. It really helped our development efforts to have them come in early and make sure we were taking the best approach."

### Faster time-to-market

Any technology adoption drives business results by getting applications into the hands of end users quickly. The pressures to release even more quickly are constantly mounting. Sencha customers cited the ability to prototype, develop, test, and release more quickly as a critical benefit.

"We run an agile shop and our goal is always to have a first iteration in days or weeks. Having a toolkit like Sencha lets us rapidly prototype so we can sit with an agent on the floor and say if it works for them."

"As a company we're constantly trying to reduce time-to-market and shorten the time between deliverables. We're looking for every little bit that can be squeezed out of the schedule. The tools are an important part of that, which is why we originally chose Sencha and why we continue to use it."

#### Excellent end-user experience

The ultimate test of the value of an application is if users can and will use it effectively, ideally without needing extensive training or documentation. User experience is vital to achieve this goal, where expectations have never been higher. The advent of easy-to-use web and mobile applications for consumers has fundamentally changed the experience users expect in both personal and work applications.

"Our users spend their days with Twitter and Facebook and playing with games and they have a great experience. That's what they expect in everything now."

These expectations impact several areas of development where Sencha can make a difference. The first is the way the application looks. Development teams are proud to deliver beautiful applications to their users, and Sencha's controls excel in having a pleasing look and feel, as well as being customizable to fit a specific style or color palette.

"You get more from your employees if they are proud of what they are doing. If you make an app that looks slick and works easily, then training takes care of itself. The days of needing a class so you can do your expense report are over."

"With Sencha the attractiveness and appearance for the end users of our applications is really top notch – one of the best."

Performance is always an issue, and today's end users have no patience. They need responsive interfaces regardless of what kind of device they are using. Sencha focuses on making sure that rendering is fast so that the interface components are not a bottleneck.

"Performance is insanely important. We have a rule that every interaction must take less than a second. Especially with users from the younger generation, their expectations have been set by consumer apps. The performance Sencha delivered was on par everywhere."

The final factor in end user experience that was frequently mentioned by Sencha customers was the need for consistency. When all screens and controls in an application work the same way, the user can more easily navigate the application. While almost impossible to put a dollar value on this benefit, clearly the budget needs for end-user training and documentation is reduced by having a consistent experience throughout an application.

"The efficiencies gained in having one team do desktop and mobile not only drove our costs down, but resulted in greater consistency which was important since our users move between device types." "Consistency of experience is tremendously important. We have a broad platform and our end users expect every feature to work the same way."

### Decreased developer frustration

Every development team has their story of the disastrous, complicated problem that took ages to find, interrupted schedules and personal events, and ended up being quite simple to fix once it was tracked down. While there can be a certain adrenaline rush as a team works together to put out a fire, experienced managers know that in the long term frustration can take a toll on their staff and have a severe impact on productivity. Sencha solutions are built to minimize these problems by being tested across dozens of browsers and devices and having all components in a single framework built to work together.

"Sure you end up saving time, which is what we showed our finance team. But as a manager, choosing Sencha was more about avoiding the headaches and sleepless nights trying to figure out weird issues without any help."

"It's too easy to end up with a hodgepodge of technology that may work together at first, or without too much hassle, but then something changes and this version doesn't work with that version of something else and you have to figure it out. And you get frustrated. Then your entire team gets frustrated. Then you need to pay to bring in help or hire someone else to keep on top of the fact that this happens every time. And it's a bad downward spiral."

#### Stability of a commercial vendor

All customers emphasized the importance of working with a vendor whose business depended upon their customers being successful. Again this was extremely difficult to put an exact dollar figure on, but certainly for any application that is expected to have any kind of lifespan, and most enterprise applications have a minimum of 5-year lifespans, this becomes an important impact on long term costs.

"Angular announced version 2.0 was going to break backward compatibility. That eliminated them for consideration."

"It is assuring that in the coming years our stuff will continue to work. Does Google care about Internet Explorer? Not something I would bet on."

"Sencha is a very dependable and reliable company. That is very important if you expect your application will last more than a few months."

Customers did not take for granted that Sencha would continue to deliver. This is such an important concern that even as a highly trusted vendor, customers regularly re-evaluate to be sure the technology continues to deliver the value that they require. The customers we spoke to were vigilant in looking for signs that Sencha continued to invest and understand their needs. The commitment to supporting new technologies as well as legacy browsers that continue to exist is a strong sign for Sencha customers.

"We see Sencha continuing to deliver great products, supporting existing environments, adding new environments, and converging so things are the same. It's good to see and shows they understand what our teams are being asked to do." "We've used Sencha for years, but we don't just continue to use it because we did in the past. We review our technology every two years and have made several changes, including moving to open source in some cases where it made sense. We completed our most recent review six months ago and Sencha again came out ahead in all areas. Seeing the advances that they made with mobile was a huge part of that decision."

# The I (Investment) in Sencha ROI

When discussing costs, the customers we spoke to found Sencha's licensing fees to be reasonable, using expressions including "irrelevant" and "not important." However, investments do have an impact on outcomes, and one of the best practices strongly recommended by successful Sencha customers is to purchase training and professional services both upfront and at key points in the development cycle.

It should be emphasized that certainly a new Sencha user can get started on their own using the resources available and develop something quickly, so for the customer that simply has no extra funds there is no need to wait. But as with any technology, expertise will help to set a strong foundation for a scalable architecture that will dramatically reduce costs during the lifecycle of an application built to last for years.

"Sencha has great resources to help us be successful - documentation, support, community, and professional services. It's up to us to make sure we leverage these to get the most out of our investment, including spending on more than just the licensing fees. Finding some budget for training or consulting so you are doing things right can save a lot of money compared to weeks or months of man-hours to figure something out after you've done it wrong."

# Conclusion

The participants in this study consistently reported that Sencha's solutions deliver real and substantial benefits, although approaches to evaluating ROI varied depending on the specific business needs of each company. Specifically, Sencha customers saw clear, hard ROI in the following areas:

- Integrated and supported platform
- Cross-browser development
- Cross-device development

In addition, participants saw many benefits that were harder to quantify including:

- Professional support and services
- Faster time to market
- Excellent end-user experience
- Decreased developer frustration
- Stability of committed vendor

"I haven't seen anything that could come close to what Sencha does for us – at any price."

# About Dimensional Research

**Dimensional Research** provides practical market research services that help technology companies make smarter business decisions. Our researchers are experts in technology and understand how corporate IT organizations operate. We partner with every client to deliver actionable information that reduces risk and increases customer satisfaction. Our research services deliver a clear understanding of customer and market dynamics. For more information. visit www.dimensionalresearch.com.

### About Sencha

More than 10.000 customers and 60% of the Fortune 100 rely on Sencha to deliver innovative applications that drive their business. Sencha provides and supports enterprise-class Java and JavaScript frameworks that leverage HTML5 to deliver solutions for desktops, smartphones, tablets and more. The Sencha family of products is engineered to support application development teams and IT organizations throughout the entire application lifecycle process from architecture, design and development to testing, deployment and management. Customers can confidently deploy solutions to end users no matter what device or platform they are using. Visit us at www.sencha.com.



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# Example of Sencha ROI – Enterprise Web Application

A Sencha customer building an enterprise web application for employee use on 3 supported browsers that involved complex data visualization calculated the following savings:

	Without Sencha	With Sencha	
Initial development costs	\$800,000	\$400,000	
Additional development costs for each extra browser	\$30,000	\$5,000	
Number of additional browsers		2	
Total cross-browser development costs	\$60,000	\$10,000	
Total development costs for each application on all required br	rowsers \$860,000	\$410,000	
SAVINGS: Development costs	5	\$450,000	
	Without Sencha	With Sencha	
Cost for each application update	\$160,000	\$80,000	
Additional update cost for each extra browser	\$20,000	\$5,000	
Number of additional browsers		2	
Total cost for each update	\$200,000	\$90,000	
Updates per year		2	
Years of application use	5		
Total update costs for lifetime of application	\$2,000,000	\$900,000	
SAVINGS: Update and maintenance costs	\$	1,100,000	
TOTAL SAVINGS WITH SENCHA		\$1,550,000	

# Example of Sencha ROI – Mobile application

A Sencha customer taking an existing Sencha desktop application and releasing it on iPhone and Android calculated the following savings:

Cost for native iPhone development	\$250,000
Cost for native Android development	\$200,000
Total native development costs	\$450,000
Cost to update existing Sencha application for mobile	\$15,000
TOTAL SAVINGS WITH SENCHA	\$435,000