DataArt Predictions for 2015 Enterprise Software Trends

Mobility-first business models, the disruption of traditional financial services companies, IoT and B2B travel innovations top the list of enterprise software trends to watch in 2015, according to practice leads at DataArt, a global software development firm that works across a number of industry verticals. Heads of the company's Financial Services, Healthcare, Travel & Hospitality, Media and IoT/M2M Consulting practices shared their predictions for 2015 in the enterprise software space.

One of the key trends: making 'data gusher' deliver actionable intelligence in the 'traditional' industry. Leaders of the Internet economy, from Netflix to Amazon to Facebook, have long mastered the art and science of data-driven, ultra-targeted decision making powered by streams of data they collect. 2015 will be the year when more 'traditional' industries, from finance to consumer goods, will begin a more aggressive push to obtain the same capability. The tools and technologies have become better understood, while the role of "data scientist" is less mysterious and product vendors have caught up with the times. We expect total spending on analytics and data visualization to at least double over the next two years in the medium- to-large enterprise sector, with focus shifting from collecting and processing data to visualization and decision support.

MEDIA

- **Mobile-only and mobile-first business models will win out and enterprise software design will finally matter**. In 2015, over 1 billion people will be using mobile as their only form of Internet access, thrusting mobile-only and mobile-first business models into the spotlight as the rule rather than exception. This shift means that companies will need to boost their investments in improving user experience (UX) and simplification, which can make or break user interfacing on mobile devices. In a landscape where it's easy for consumers to switch to more user-friendly mobile brands, companies will no longer be able to simply port their Web sites to mobile anymore, meaning UX investments will be key for companies looking to remain relevant. With 2015 just on the horizon, it's time to get the RFPs out if your enterprise technology solutions don't already have native Android or iOS end-to-end experiences.

- **Big data will boom as the marketing landscape shifts and pre-targeting thrives**. In 2015, we may see some of the big data efforts finally pay off. In social and mobile advertising where ads are key content, banners are still important; however they're not growing like the rest of Internet advertising. As 2015 moves on, we'll start to see a decrease in banner advertising, perhaps for the first time ever in the digital landscape. Ad targeting is also going to experience some shifts, and pre-targeting will have a good chance to become a great tool to predict buyer's preferences while they're still in the shopping phase, not after it, instead of remaining a mystery black box. Although larger companies like Amazon already offer some level of pre-targeting to consumers browsing its Web site, this is a tool set to see more widespread adoption across small- and medium-sized companies in the near future.

- **The backend processing battle is set to heat up next year**. With Apple Pay already disrupting the payments market, the battle over backend processing is set to get fierce as we transition into 2015. Braintree already has a dominant spot in the market providing the tools needed for

this processing, from a simple iOS integration via v.zero to back-end processing of Apple Pay tokens. As more service providers enter the market with end-to-end integration offerings for payment platforms though, we expect the battle to not only get fierce, but to see some excellent innovation and tech advancements as a result.

FINANCIAL SERVICES

- **Traditional banks will continue to be disrupted by agile new entrants**. Retail banking, which is already undergoing a revolution of sorts, will see stronger competition in 2015 as older and traditional banks butt heads with a new generation of universal and internet banks that cater to the maturing Millennial and Y Generations. The movement of big Internet companies into the financial services realm – including Google, Amazon, and Apple – will also contribute to this trend. This disruption also has the potential to filter down to how firms serve SMBs, giving them access to additional and more agile services that allow them to gain better transparency into both their own business needs and those of their clients.

- **(Not) reinventing the wheel, a.k.a. the age of consortia**. Financial firms now realize that many functions that have traditionally been built in-house (often several times for different divisions) offer little competitive advantage but carry huge price tags. Large banks have on occasion been pooling together to address these issues in the past. In 2015, we expect to see this consortium-building occur a lot more, and the trend will spill over to other sectors of the markets including buy-side firms. The range of functions will also widen dramatically, from reference data to research distribution to trade execution, due diligence and compliance. As a side show, mid-to-large firms will ramp up efforts to spin-off proprietary IT to standalone businesses, both as an attempt to recoup their investment and provide career options for staff. Expect to see many more asset management back-office platform products that look awfully similar.

- **The squeeze in the middle will lead to more – and better – financial IT outsourcing**. As IBM [argues](#), in today's environment both large banks and niche specialized players tend to do well, with the former benefiting from sheer scale and the latter from aggressive pursuit of the market's most desirable customers. This trend is positioned to also extend to the buy-side, and mid-size asset management firms will have to out-innovate the small guys while pushing their operations to their limit in order to survive. Firms, increasingly unable to keep all of their IT in-house for cost and time-to-market concerns, will lead the next wave of 'smart outsourcing' by working with select providers that can drive business outcomes, invest heavily, and share in success by taking ownership and commercializing technology across clients. Small shops can't afford this approach and larger firms struggle to look beyond old school staff augmentation models, so this is really the chance for mid-size firms to shine – or be squeezed.

- **The war for talent will get brutal. And funny**. In the last 3 years, as the extreme heat generated by Silicon Valley warmed Silicon Alley, young geeks have begun slowly turning away from Wall Street careers toward flip-flops and the stock-options-laden consumer internet economy. We have now crossed the tipping point, with startup kids threatening to disrupt the industry itself (for instance, [Marc Andreessen proclaimed, modestly, "we can reinvent the entire thing"](#)). For financial CTOs, recruiting will no longer be a matter of efficiency, but one of sheer survival. Expect some comic relief as uptight bankers try to play cool. Outsourcing vendors will benefit, too, but only if they can up their game to deliver real solutions, not staff augmentation.

- **(Web) power to the people**. Finance has been grotesquely slow to adapt Web and mobile UIs for critical business functions, citing – not without reason – that performance, security and maintenance concerns give cause for going slow, a.k.a. doing nothing. Now that the rest of the world has proven it works, we will see a flood of enterprise UX modernization efforts. What will make it interesting is that UIs will be developed with end-users, not intermediaries, in mind. Web power will show itself as clients slice and dice portfolio data themselves instead of receiving it from investment advisors via emailed PDFs. Investors will review portfolio exposure data on their own rather than depending on marketing teams to massage risk-reports in Excel. All of this will be intuitive and will happen in real time…just five years late.

- **Growing transparency in investment and wealth management will create a tactical impact**. Providing investors with better transparency on the current state of their investments will become essential, as visualized reporting and insights are delivered to end users through new technological means. Mobile channels, big data, and the visualization of everything, things that were previously intended for in-house usage, will increasingly be offered as a competitive advantage to maintain and win new investors. Though regulatory requirements for transparency will have a stronger tactical impact, handling client concerns will become more and more important in this highly competitive market.

INTERNET of THINGS & MACHINE-TO-MACHINE

- **Lowered barriers to entry in IoT will enable smaller firms to get their foot in the door**. Traditionally, the complexity and high costs involved with developing, deploying and maintaining IoT solutions have been quite high and thus relegated to larger industries like manufacturing and fleet management. As more solutions that can ease the burden on prototyping begin to inundate the market though, the total cost of ownership for firms across the board is being lowered, giving smaller businesses in the commercial space the chance to experiment and create IoT solutions in a cost-effective way. Furthermore, since the market is still years away from a turnkey solution, there's plenty of opportunity for vendors across the board to develop platforms, frameworks, and customizable solutions to further help companies looking to break into the space or retrofit existing solutions. Players like Android have a dominant hold on the consumer development side of the market now, but looking ahead we're going to see an explosion of innovation from less-known brands.

- **Pattern-based recognition will continue to wash over home automation**. As home automation becomes a commodity, a new wave in the space will emerge with pattern-based recognition with home systems including electricity and water use. Smart homes as a major and grand phenomenon will fall to the wayside as they become more widespread and commonplace.

- **Big Data will become more critical to derive from the IoT as data volumes grow**. In a recent report, Forrester predicted that the data economy will dramatically expand in 2015 as new data sources and cloud analytics tools become available. As businesses involved in the IoT increasingly look to access and analyze this data to benefit their own businesses and the customer experience, more companies will get quicker on the uptake of devices and services that enable them to do this and thus will achieve greater business efficiencies.

- **Healthcare IoT wearbles will enter a race for dominance in and delivery of next generation care.** The healthcare wearables market has been around for a few years now with products such as Nike's FuelBand and Jawbone's UP. New players, including Samsung's Tizen, Android's Wear and the Apple Watch, will compete with each other for dominance in the market as they accumulate huge amounts of data for the processing and analysis of increasingly for advanced data types, such as mileage and pulse. Healthcare wearables are also being used to improve the quality of data collected in clinical trials, and improving the lives of patients with chronic conditions like diabetes, and heart conditions. With chronic conditions causing roughly 75% of U.S. healthcare costs, wearables have the potential to dramatically reduce the costs within the U.S. healthcare system by giving physicians a holistic view of a patient's health and wellness, thereby leading to early intervention and prevention.

- **Smartphone use will become more universal as integration into cars catches on.** Next year we'll see two major releases in smart car tech advancements with the launch of the In Car Apps Systems by Apple CarPlay and Google Android Auto. The apps will lead to the safe rise and use of smartphones while driving, bringing the smartphone to virtually all aspects of everyday life. For Android developers as of the end of 2014 though, it's possible to integrate the messaging and audio apps, but more applications are likely to follow suit. It's also likely that in the future, this API would be expanded, and the IoT will have one more "thing" in it: the car.

TRAVEL & HOSPITALITY

- **Metasearch and B2B tech offerings are going to make OTA travel competition hot.** Metasearch is the fastest growing channel for travel shopping in the U.S. and continues to grow as consumers flock to Trivago (Expedia), Kayak (Priceline) and TripAdvisor's comparison shopping engines. Additionally, hoteliers are increasingly looking toward integrating more tech functionality into their offerings, so collaboration and boosted B2B tech offerings will spur on the competition. As the main players continue to make large investments in fine-tuning the technology behind their engines and even white labeling their platforms for B2B use, smaller and more traditional online travel agents (OTAs) will need to decide whether they also want to make it easy to participate in the market or fight an uphill battle against metasearch bots and other mainstream tech advancements.

- **A new distribution price war could be emerging with Amazon's launch into travel**. Amazon recently announced that it will be launching into the online travel market early next year. The company plans to charge a very "hotel-friendly," 15% all-in commission to cover distribution fees and credit card processing fees, putting pressure on old-school OTAs to bring their models and costs in line. While small at first, Amazon has the consumer data and the ability to scale their model, so this could be a market force to be reckoned with if everything moves forward as currently planned.

- **The sharing economy will remain a battleground in 2015**. 2014 saw a lot of disruption and challenges in the sharing economy, especially with companies like Uber, Lyft and AirBNB exploding in popularity. Entities being disrupted, including hotels and taxi cab companies, will continue to lobby legislatures while the disruptors find a way to legitimize and legalize themselves. Additionally, travel apps and innovations will continue to steal revenue from traditional players in the market, enabled by the fact that around 99% of customers show up on

hotel doorsteps with their mobile devices in hand loaded with these cutting edge technology. Customer behaviors and expectations are changing, with Uber already leading the way with its integration of Spotify into its app so that customers can tune into their own music libraries en route to their destinations. Unless market stalwarts react and innovate, this will continue to cost them money.

HEALTHCARE

- **Regulation will continue to hang heavy over healthcare, but the wellness industry will boom**. The healthcare legal landscape remains complicated and very challenging to navigate. Everything related to processing patient data or introducing new technology at points-of-care is subject to government regulation and certification with the Federal Drug Administration (FDA). While other industries will be showing off new technological advances, only the less regulated wellness sector will have the chance to show the market real movement. Major players such as Apple are entering the space, putting a spotlight on wearable devices. Wellness is on track to become mainstream, with movements such as Quantified Self gaining popularity and attracting increasing numbers of entrepreneurs into the industry.

- **Genomics and infectious disease diagnostics will be vastly improved**. The availability of next generation genetic sequencing techniques is about to revolutionize diagnostics for infectious disease. Historically, you needed to test for one pathogen at a time and hope you were testing for the right one. Today, we've made advances in sequencing technologies that are allowing labs to catalog the genetic sequence of every pathogen in a biological sample and then identify the culprit. As this technology becomes readily available, it will speed up diagnosis and eliminate diagnostic errors.

- **Patient engagement will be swept to the next level**. Telehealth virtual doctors are bringing back low cost, at-home doctor visits, making physicians more accessible and reducing the time and effort it takes for a patient to receive the care they need. Faster access to care improves outcomes and reduces costs. Once the United States addresses **telehealth reimbursement** and the legal issues associated with providing healthcare services across state lines, telehealth offers huge benefits to the healthcare industry. Some other countries do not have the legal limitations that we have regarding telehealth, so expect to see this take hold overseas before heading to the U.S.

"A lot of enterprise software capabilities that have emerged in 2014 are currently positioned to throw a number of industries into intense competition in 2015," said Eugene Goland, President at DataArt. "Everything from IoT solution development and mobile-first business models to financial IT technology innovations. Mobility will be huge, with competition in the connected devices arena getting particularly hot, especially with the pending launch of Apple Watch and related technologies next year. The mobile payments space will experience a similar story as companies look to innovate ways to cut into Apple Pay's anticipated hold on the market."

About DataArt

DataArt (www.dataart.com) is a custom software development company that builds advanced solutions for the [financial services](), [healthcare](), [hospitality]() and [other]() industries. Combining domain knowledge with offshore cost advantages and resource flexibility, DataArt develops industry-defining applications,

helping clients optimize time-to-market and minimize software development risks in mission-critical systems. With an unrivalled talent pool of highly skilled software engineers in New York, London, Zurich and Eastern Europe, DataArt provides the technical skill, accountability and industry knowledge needed to deliver custom applications on time and on budget. DataArt clients include Standard & Poor's, Harmonic Fund Services, Ogilvy, artnet, Panasonic, Cancer Research, Ocado, Charles River Laboratories, Betfair, Misys, leading asset management firms and three of the world's top ten investment banks.