UNLOCK BUSINESS GROWTH AND INNOVATION THROUGH STANDARDIZATION IN THE WORLD OF THE IDEA ECONOMY[*]

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We are now living in an Idea Economy, where the ability to turn an idea into a new product or service has never been easier. In this paper we present a new model, describing in details the main changes that companies has to implement today. We outline the core principles the companies should follow to succeed in this newly created business environment. At the end, we propose a practical steps for Bulgarian SMEs how to implement this model, by following the approach defined in ITSM4SME project.

1. Introduction. Ideas have always been the root of progress and business success. They've launched companies, created markets and built industries. But there's a difference today. In this hyper-connected world, good ideas are not enough. Success today is defined by the ability to turn ideas into value faster than your competition. Today, the tools that enable disruption – things like cloud computing, mobile technology, big data analytics – are so easily accessible and affordable, they have given rise to a new class of entrepreneurs. And, these challengers of the status quo are revolutionizing entire industries at a pace and scale never seen before.

In the Idea Economy, no industry is immune to disruption. Whether in energy, healthcare, manufacturing or telecommunications, companies – be they start-ups or large enterprises – can only survive if they have both the vision and technological agility to respond to market opportunities and threats and quickly turn ideas into reality. While turning ideas into reality is easier than ever, the bad news is, it's also easier for your competitors and companies you may not even know about yet. Today, an entrepreneur with a good idea has access to all of the infrastructure and resources that a traditional Fortune 500 company would have. . . and they can pay for it all with a credit card. They can rent compute on demand, get a SAS ERP system, use PayPal or Square for transactions, market using Facebook or Google, and have FedEx run their supply chain. The days of needing millions of dollars to launch a new company or bring a new idea to market are fading fast.

You don't have to look any further than more recent companies such as Vimeo, One Kings Lane or Dock to Dish, or with more common names like Salesforce, Airbnb, Netflix and Pandora to see how the Idea Economy is exploding. How about Uber? Uber's impact

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has been dramatic since it launched its application to connect riders and drivers in 2009. Without owning a single car, it now serves more than 250 cities in 55 countries and has completely disrupted the taxi industry.

San Francisco Municipal Transportation Agency says [1] that cab use has dropped 65 percent in San Francisco in two years.

It's All About Faster Time to Value. Time is arguably the biggest enemy any company faces today (see Fig. 1). While cloud, mobile and big data give you the ability to accelerate time to value, most organizations have been built with rigid, inflexible IT infrastructures that make it difficult, if not impossible, to implement innovation quickly.
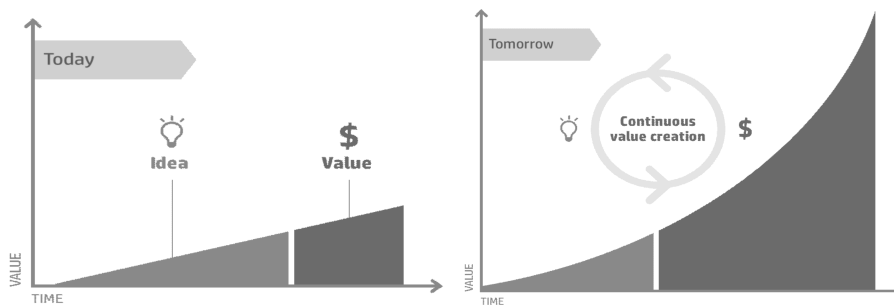

Fig. 1. Time to value is top priority [2]

- Leading enterprises will be able act instantly and adapt continuously
- Time to value and speed is the new name of the game. How fast an opportunity can be identified and help to alter the DNA/combine the right resources (people/apps/data) to create value that can be monetized.
- These gaps are "leaps of faith" changes. The value creation in the old world was punctuated/sporadic – not continuous as the graph on the left hand side looks. Episodic, sporadic and punctuated by delays.
- Right side. This is about smoothing out risk by reducing the quantum of change.
- Time. A nanosecond is a nanosecond. We can't change the element of time. It is constant. But what you can do is change what gets done in that time,
- Time has now become public enemy #1.
- The business has to radically change the time it takes to get value from its investments.
- It is not enough to just be virtualized, optimized, and agile. We need to start thinking in terms of continuous disruption. The key for customers is to be able to capitalize immediately – or at least faster – than competitors on new business and government opportunities.

2. How to address the challenge. To respond at above threats IT must become a value creator and bridge traditional and new business models. Move from business environment where IT is considered as cost element:

- Efficiently host workloads & services
- Provide hardened systems & networks
- Store and manage data

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- Software automates business systems

To the business environment which use IT as a broker of services to create outcomes and enable business growth:
- Continuously create and deliver new services
- Manage and mitigate risk
- Provide real time insight & understanding
- Software that differentiates products and services

So, we can define the new model how businesses can use IT with the following main principles, which will be further explained in details:
- **Transform to hybrid infrastructure**
- **Ensure your business assets are protected**
- **Gain insights from 100% of your data to enable business growth**
- **Enable mobility anywhere, anytime.**

Looking forward, by 2020 [2] there will be 7.6 billion people, with 100 billion connected devices and things, requiring 1 trillion apps.

Most of that one trillion – will include a new breed of applications necessary to compete in the idea economy.
- Mobile apps.
- Cloud native and webscale apps.
- Apps to power the internet of things.
- Apps to engage, apps to analyze, apps to understand.

At the same time, traditional enterprises must also continue to support and integrate with the workloads running their business today [3, 4, 5, 6]. This is a massive challenge for us all.

The key is to bridge the apps and workloads of today and the apps of tomorrow.
- Recognizing that they are different in how they are designed, hosted and consumed.
- Have different requirements for infrastructure.
- And force us to think differently about how we test, deliver, and optimize them.

One size doesn't fit all [7, 8, 9]. That's why we believe hybrid infrastructure is the new normal.

3. Transform to Hybrid Infrastructure. Moving to hybrid is hard – but the pay-off is huge. The journey is unique per business environment. There are 3 main steps:
- **Automate** – to get anywhere close to the level of agility end-users are requiring, IT Operations needs to automate those manual tasks, including provisioning, patching, and maintaining compliance across all of the infrastructure elements.
- **Orchestrate** the end-to-end processes like incident management, change management, and disaster recovery. Simple steps like to automate things used on a daily basis to free up time for innovative projects.
- **Transform Delivery** – to deliver with the agility required, IT needs to transform the delivery of application lifecycle, through modern agile processes like DevOps, and transform end-users access to the services with a centralized catalog, that establishes IT as a broker of services including in-house, and cloud-based services.

The reality is that almost every business today has legacy applications – legacy meaning anything running today in the data center. Many of those apps are core and strategic to the company mission. But the businesses also need to build a bridge to tomorrow's apps, workloads and data. To do this they must start with virtualization

of their infrastructure. This will include modernizing their servers, storage and network foundation to give their workloads and operations a boost.

4. Security – ensure your assets are protected. Our digital world is radically changing the risk landscape:

- More sophisticated cyber criminals
- Always present issues of natural disaster and needs for data protection, governance and compliance

In addition – there are new threats emerging from hybrid and mobile that are dissolving the traditional perimeter, scattering our data everywhere and creating new exposures across the internet of things.

New thinking and new approaches are required

- It's not enough to protect things – you have to protect the entire interaction.
- While we do protect apps and data, the differentiator and new school thinking is to focus on the interactions.

The business need to have a comprehensive toolset to enable modern approaches to risk management, including solutions for every type of risk – from research on emerging threats to intrusion monitoring and forecasting with big data. Best-in-class back up and recovery options are also a must to ensure that the companies can recover quickly when the worst happens.

Put it all together, this helps the business to:

1) Know what's coming and prepare for attacks with the latest threat intelligence and assessments of their security and business continuity capabilities
2) Secure digital interactions – harden defenses and secure the applications, traditional data centers, emerging cloud and mobile platforms as well the interactions across the enterprise.
3) Detect and Manage inevitable breaches – build the capacity to efficiently detect and manage breaches with analytics
4) Ensure continuity and availability – deliver highest levels of business continuity and availability by eliminating traditional backup silos and intelligence gaps

5. Gain insights from 100% of your data to enable business growth. Most of the technologies designed for managing and analyzing data were designed for an era when the data we cared about – the **business data** from the systems of record – neatly fit into rows and columns. So relational databases, enterprise data warehouses and business intelligence tools served us for many years. The challenge is (see Fig. 2) that the fastest growing segments of Big Data are Human Data and Machine Data, with a new set of challenges:

Human Data includes all the content we create:

- some of which is highly regulated for compliance purposes, like contracts, legal documents, medical or business records, or customer communications;
- other content that may not be regulated but is still valuable, including marketing documents, emails, social media posts, images, voice recordings and video.

Think about how calls are recorded and monitored in a call center. Traditionally we would only be able to automate and capture the structured data like the time & length of a call, but what matters most to us is the content of the conversation itself – what was the customer trying to achieve, what was their experience like, how well did the CSR's responses satisfy the customer? This is a goldmine for marketing, customer service and
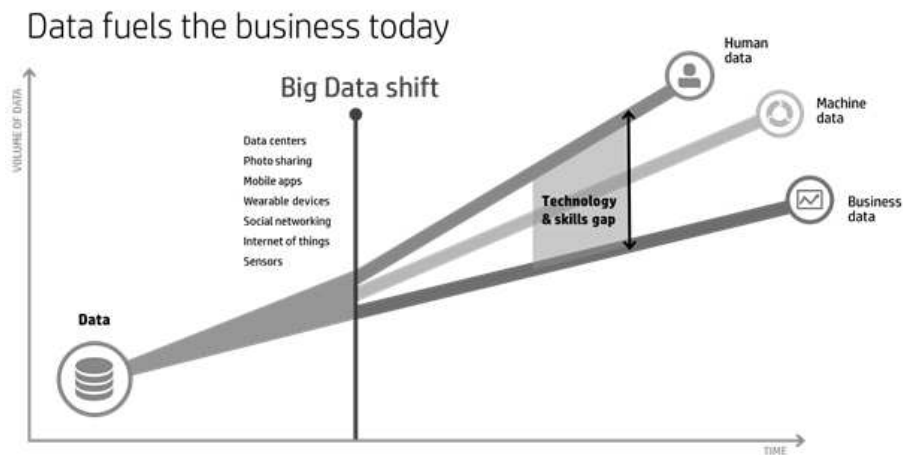
Fig. 2. Data fuels business growth – Empower data driven transformation area [2]

even product development, but a call center supervisor cannot possibly listen to every call and traditional data architectures don't offer much help.

Machine Data is the complete opposite of Human Information. It's the high-velocity information generated by the computers, networks, security devices and sensors embedded in just about everything—the Internet of Things. These could be system log files, click streams, IT monitoring feeds, temperature reads, energy usage stats and building access alerts. How the business could make sense of the millions of events generated every second, and find the anomalies to rapidly identify a system outage or security threat? It's the proverbial needle in a haystack and our traditional data architectures weren't built to handle the speed and volume of machine data.

Together, Human Data and Machine Data are growing 10x faster than traditional Business Data and this growth has created a technology gap. Traditional data vendors are trying to extend the architectures designed for Business Data, but our customers are complaining that those architectures aren't scaling.

6. Enable workplace anywhere, anytime. The challenge is that the digital workplace is everywhere. Customer engagement happens on an app before it happens with a person. Employees have to be ready at a moment notice to engage. With ever increasing demands to deliver more experiences, on more devices, more often, to people that are more engaging – is a massive challenge.

The business wants to proactively enable its employees with mobile applications and connectivity. Mobility provides a rare opportunity to reach customers directly. Customer's experience with mobile applications is critical to creating intimacy. Many enterprises today are in a reactive situation and we know that "random acts of mobility" are not delivering the business outcomes needed.

To solve the above challenges the companies should create positive, simple experiences that are user-centric, reliable, and consistent. No one continues to use a bad application – whether it be an airline app that gives you the wrong gate information, or a retail app that doesn't update its inventory information fast enough. A customer's loyalty is

derived from reliability, performance, and accuracy. The design must be end-to-end. It must incorporate the device, the network, the core application infrastructure, and it must be able to adapt in real time. To achieve radically different levels of productivity, the business must **think** differently, **act** differently, and **collaborate** quickly.

7. Unlocking business value and innovation through standardization in Bulgaria. To enable research and integration of IT innovations for one company you should have needed resources. It is very common for most companies in Bulgaria to fully utilize his IT resources in operations, giving no space for research and integration of new solution. The major reason for this is lack of understanding of IT standards like ITIL, COBIT and COPC. In most of the cases they run their IT operations in a way which is not effective, without long term plans and with focus only on providing needed IT services for core business of the company. This is especially valid for small and medium business. Being part of ITSM4SME international project [10, 11, 12] we made research and training for more than 50 small and medium companies in Bulgaria from different industries. During the meetings and discussion with their management we noticed several important observations:

1) **All companies understand the importance of IT innovations for driving the company business**
2) **When IT is not the core business of the company, this services are simply considered as cost for the company**
3) **Communication between executive management and IT department is not on needed level. In many cases they are talking on different languages (management looks on IT as a cost which need to be as minimum as possible and IT looks on management as a stopping point for implementing of latest solution.)**
4) **Lack of understanding for the importance of IT standards and the benefits off their implementation in day to day operations.**

There are different reasons for lack of knowledge in IT standards. From one side this is huge and complicated materials provided with ITIL, COBAL, COPC standards (for ITIL there are 7 books with more than 2000 pages). This materials as well as examples covered in trainings, are mostly for huge IT companies. And they are not applicable for small and medium business where IT departments are from less than 10 people and IT infrastructure is really small (includes less than 10 servers). From other side, lack of knowledge and experience in ITIL, require hiring of consultant for implementation, which comes with serious expenses. All this makes ITSM not attractive for small and medium companies. The purpose of ITSM4SME project was to provide more simple and understandable model, applicable for SMB in Eastern Europe countries.

It is clear for everyone that in today's world, innovations can make you successful or put you out of business in very short time. Being innovative is not only using the latest technologies, but take advantage of them and make a difference in your industry. Sometimes spending money for IT infrastructure is not needed. But here comes the importance of communication between IT and executive management. Both sides needs to understand each other to make a correct business plan.

And here we can use IT standards. ITSM4SME provide more simplified approach to IT service management, which is easy to understand and implement without spending too much effort and on acceptable cost. When you run small company in Bulgaria, hiring

of IT experts is not cost effective. You need to make a decision to outsource your needs to another company. In this situation IT standards helps to identify what can be the proper SLAs which you can require from the providers as well as comparison between different vendors.

There are many advantages in implementing of standard solution for IT service management. ITSM helps for make a connection between business strategy and IT management. Using structured plan and proper forecast for IT services can be taken in consideration in Business strategy. This makes also transparent time and cost expenses – something very important for every business. It's also proven that using a proper ITSM, helps you to lower the operational load of IT, which also bring the operational cost down. This make space to consider resources for continues improvement and innovations. In cases when you outsource your IT services, lower expenses, allows you to move resources and budget to your core services, which can give you needed competitive advantage. Recent research used form ITSM4SME project shows that when IT department of company integrate ITSM processes in their business, allows them to manage 20-40% more workplaces with same workforce. Interesting fact is also that companies using ITSM creates 2.5 times more innovation than others.

However implementation of ITSM is not easy. Workload is so heavy in daily operations, that management don't find a needed time to focus on this. Additional problem is that normally any new service/process comes with additional expenses. And sometimes it can be so high, that makes the change impossible. Lack of understanding of IT services is also common for executive management of SMB companies. When you don't have enough information you cannot make the right choice for IT services. WE need to mention also common resistance to change in people. Many changes were failed because of this reason. In same time there no so many trainings dedicated on IT service management and result is that more than 50% of the company's management is not using ITSM (some of them never heard of it).

To make such change successful several important factors should be on place. Company management should support this change on 100%. Any change without leadership support will fail. From other side open communication to the all employees with reasons for this change as well as expectations from them, is also very important. Purpose of implementation of any new service or process is to optimize employees work and must be accepted and followed from them. Simplicity and transparency is very important – many changes fails because of not properly calculated complexity.

ITSM4SME project provide a good start for SMB business in Eastern Europe. Apart of Face to Face training provide for more than 80 SMB companies only in Bulgaria, there are online materials and also business modeling software available on `http://www.itsm4sme.eu/`.

REFERENCES

[1] San Francisco Municipal Transportation Agency archives: `http://archives.sfexaminer.com/sanfrancisco/report-says-sf-taxis-suffering-greatly/Content?oid=2899618` (2014)

[2] M. WHITMAN. The HP Enterprise strategy, Hewlett Packard Securities Analyst Meeting,

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15th September 2015, `http://h30261.www3.hp.com/~/media/Files/H/HP-IR/documents/events/09-15-2015/HPE-SAM2015-CEO.pdf`

[3] IDG Research Services, IT Executives Vision, conducted for HP, for 20/20, May 2012.

[4] D. A. Horn, G. Bone. Developing a business model for product environmental stewardship within IBM. In: Proceedings of the 2010 IEEE International Symposium on Sustainable Systems and Technology, 2010, pp. 1–1.

[5] A. Osterwalder, Y. Pigneur. Business Model Generation – A Handbook for Visionaries. Game Changers, and Challangers. Hoboken, New Jersey: John Wiley & Sons, 2010.

[6] H. Chesbrough. Open Business Models. Boston: Harvard Business School Press, 2006.

[7] D. J. Teece. Business models, business strategy and innovation. *Long Range Plann.*, **43**, Nos 2–3 (2010), 172–194.

[8] H. Krcmar, M. Böhm, S. Friesike, T. Schildhauer. Innovation, Society and Business: Internet-based Business Models and their Implications. Berlin, München, HIIG Discussion Paper 2012-07, 2011.

[9] P. Weill, T. W. Malone, T. G. Apel. The Business Models Investors Prefer. MIT Sloan Manag. Rev., no. Summer 2011, 2011.

[10] Al. Ivanov. IT Mega-Trends: The creation of a new Style of Business. In: ITSM4SME Closing Conference "Digital Transformation: Opportunities and challenges for SMEs in the Danube Region", 15 September 2015, Vienna, Austria.

[11] Ch. Moser. EAM – Transparency for the Digital Transformation of SMEs. In: ITSM4SME Closing Conference "Digital Transformation: Opportunities and challenges for SMEs in the Danube Region 15 September 2015, Vienna, Austria.

[12] Al. Rossmann. Linking Business and IT Services in the Digital Transformation. In: ITSM4SME Closing Conference "Digital Transformation: Opportunities and challenges for SMEs in the Danube Region", 15 September 2015, Vienna, Austria.

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КАК ДА ПОСТИГНЕМ БИЗНЕС ИЗРАСТВАНЕ И ИНОВАЦИИ ЧРЕЗ СТАНДАРТИ В СВЕТА НА ИКОНОМИКАТА НА ИДЕИ

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Ние живеем в света на икономиката на идеи, където възможността да превърнем идеята в нов продукт или услуга никога не е била по-лесна. В тази статия представяме нов модел, описващ в детайли основните промени, които компаниите трябва да осъществят, за да бъдат конкурентноспособни. Ние описваме основните принципи, които компаниите трябва да следват, за да бъдат успешни в тази нова бизнес среда. Накрая предлагаме практическите стъпки за едно типично българско малко предприятие, за да може да приложи този модел чрез спазване на препоръките, дефинирани в проекта ITSM4SME.