Welcome to the Virtual IMS user group newsletter. The Virtual IMS user group at www.fundi.com/virtualims is an independently-operated vendor-neutral site run by and for the IMS user community.

Virtual IMS user group presentation

The latest webinar from the Virtual IMS user group was entitled, "Your Blueprint for Digital Transformation, starting with IBM Z and IBM IMS". It was presented by Betty Patterson Bucci, Distinguished Engineer, IMS Chief Architect at IBM.

Betty Patterson Bucci is an IBM Distinguished Engineer and Chief Architect for the IBM Information Management System (IMS) product. Betty is responsible for IMS strategy and architecture and works with clients around the world. Betty has driven innovations into the product to make it easier to manage and operate IMS and has expanded the flexibility in configuring the product for availability;

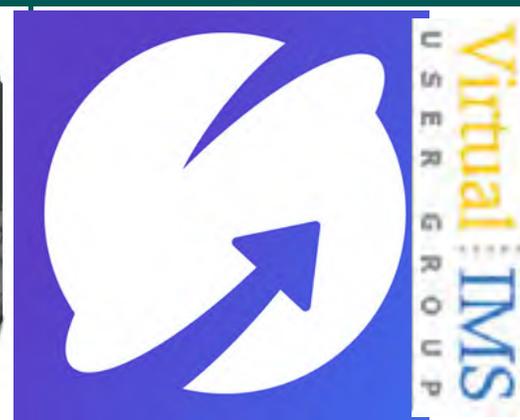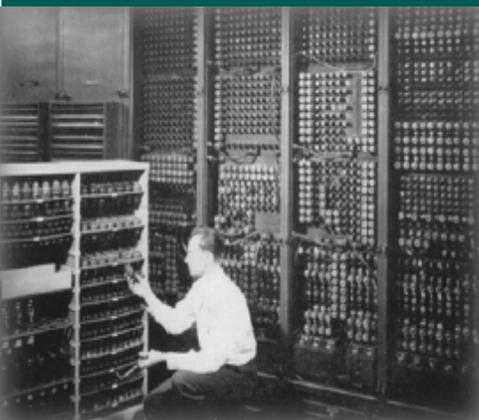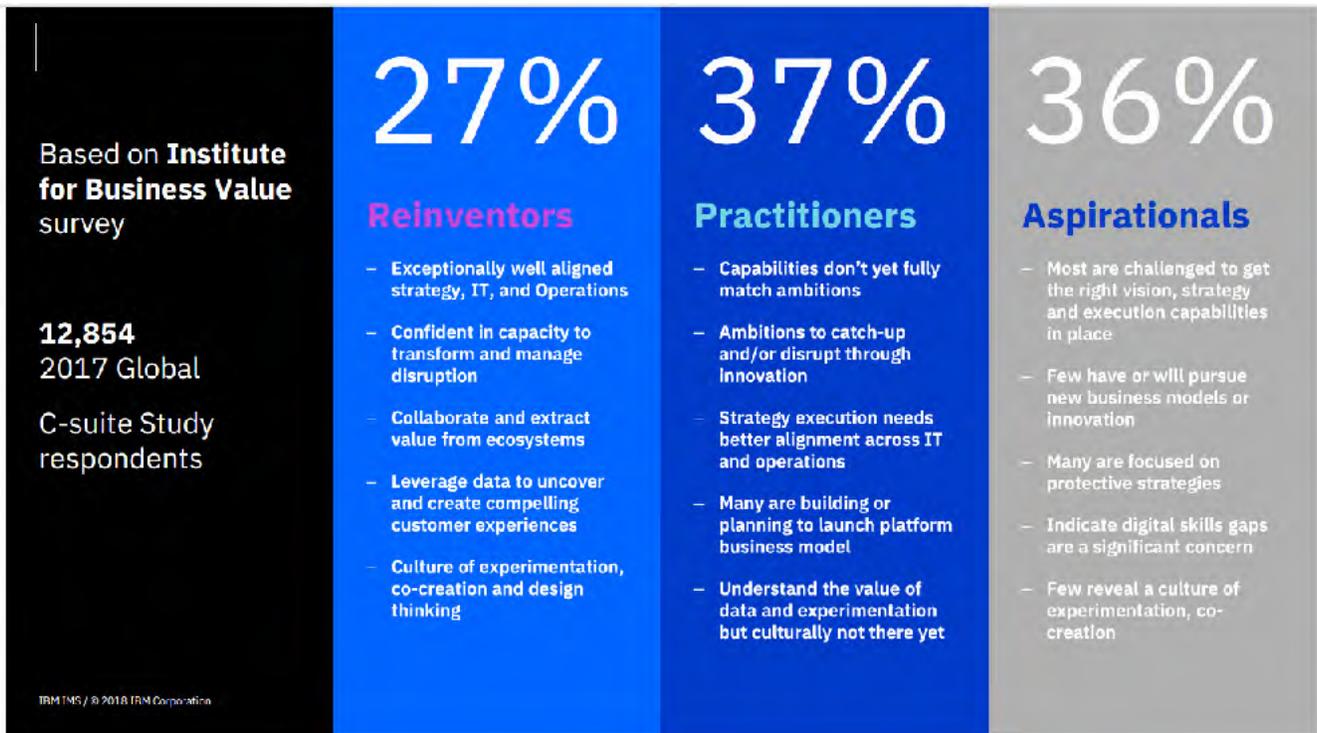
Figure 1: Digital Transformation responsibilities by persona

including the areas of system management, automation, operations, parallel sysplex, and shared message queues. Betty has a long history of leadership and innovation in driving the transformation in IMS. Betty is currently focused on using design thinking methods in collaboration with IMS clients

Contents:

Figure 2: C-suite study respondents

to drive new IMS functions while improving usability and availability. Betty is based at the IBM Silicon Valley Laboratory in San Jose, California and is a member of the IBM Academy of Technology.

Betty Patterson Bucci started the presentation by looking at 'the why' of digital transformation. Recent statistics suggest that the biggest impediment to digital success are: resistance to change (43%), and lack of budget (25%). Digital Transformation is an organization's response to the ongoing disruptions facing industry markets such as government and banking.

Figure 1 shows the Digital Transformation responsibilities for different people in an organization.

According to a White Paper Published by IBM entitled *The Business Value of the Connected Mainframe for Digital Transformation*, "After several years of relentless hardware and software innovation, the mainframe is at an inflection point from being a supporting platform of transaction revenue to becoming a source of revenue growth and innovation."

The mainframe has a vital role in the digital economy. Mainframes process 30

billion business transactions per day. They enable $6 trillion in card payments annually. 80 percent of the world's corporate data resides or originates on mainframes. And 91 percent of CIOs said new customer-facing apps are accessing the mainframe.

The report also suggest that Digital Transformation can have an important impact on an organization's bottom line by providing a 300 percent return on investment over 5 years/ Also, infrastructure costs can be reduced by $18 million, there's $200m in additional revenue per year, and there's a 27 percent reduction in mainframe licensing costs.
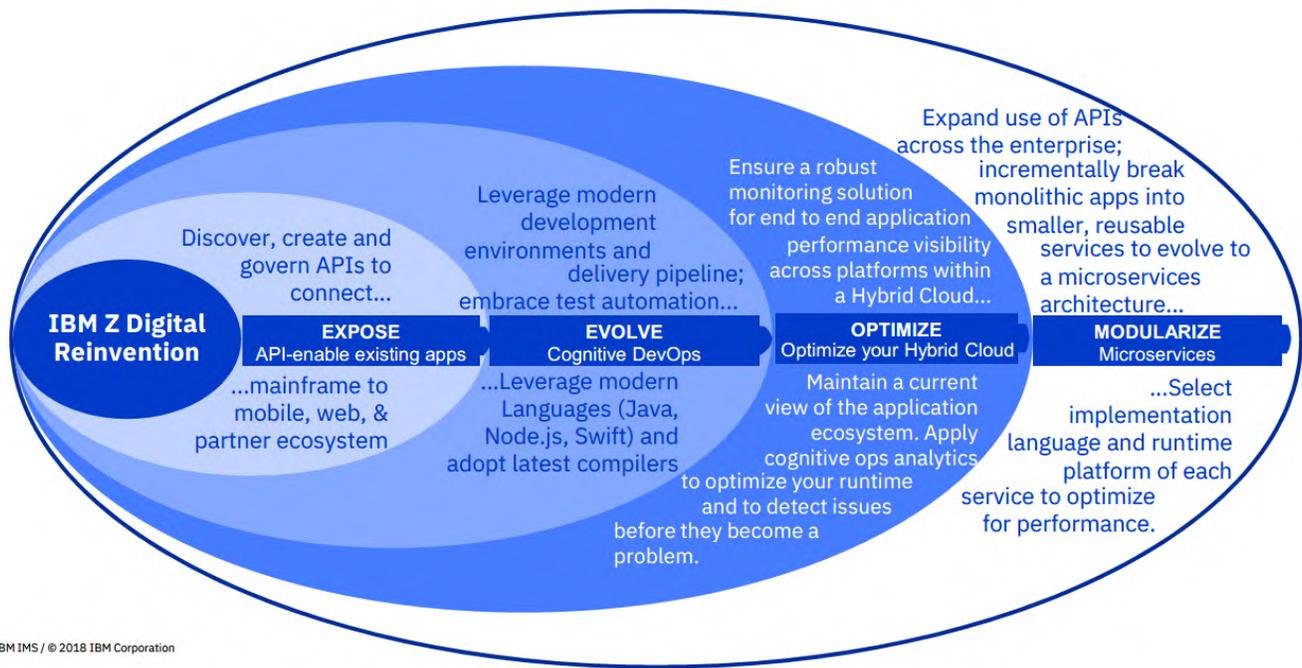
Figure 3: IBM Z Digital Transformation Maturity Model

Moving on to 'the how', Betty suggested that the best kind of Digital Transformation was Digital Reinvention. And part of that was through the API economy. The idea is to capitalize on the business opportunities created by the API economy. Your business assets (data, function, or computing resources) can be represented as digital products. Co-value creation occurs using third-party APIs, developers, partners, hobbyists, or IT departments, all of whom consume, compose, and produce APIs and apps. Apps as strategic applications emerge. Apps and APIs are used to re-imagine the client experience, creating new or enhanced business processes that leverage mobility, cloud, analytics, and social platforms. Figure 2 illustrates the stages sites are at in this process – expose, evolve, optimize, and modularize.

Figure 3 shows the steps involved in the Digital Reinvention process. Firstly, API-enable transactions, programs, and stored procedures. Break monolithic applications into microservices. Extract business rules into a decision management tool. Write new functions as microservices in Java, Swift, or node.js. The language and platform used is based on the needs of each microservice. Adopt DevOps for faster delivery and responsiveness.

You don't buy DevOps, you do DevOps. It's an approach, a mindset – a combination of culture, process, and technology (including infrastructure, tools, and services).

DevOps on a mainframe can involve using GitHub, artifactory, Maven, Jenkins, Ansible, UrbanCode, and z/OS MF. Swagger can also help with DevOps.

The Connected Mainframe is a platform that is integration-ready both within and outside the mainframe with Java, Linux, Web and API enablement. Integrate the mainframe with the rest of the data centre infrastructure and IT processes with hybrid
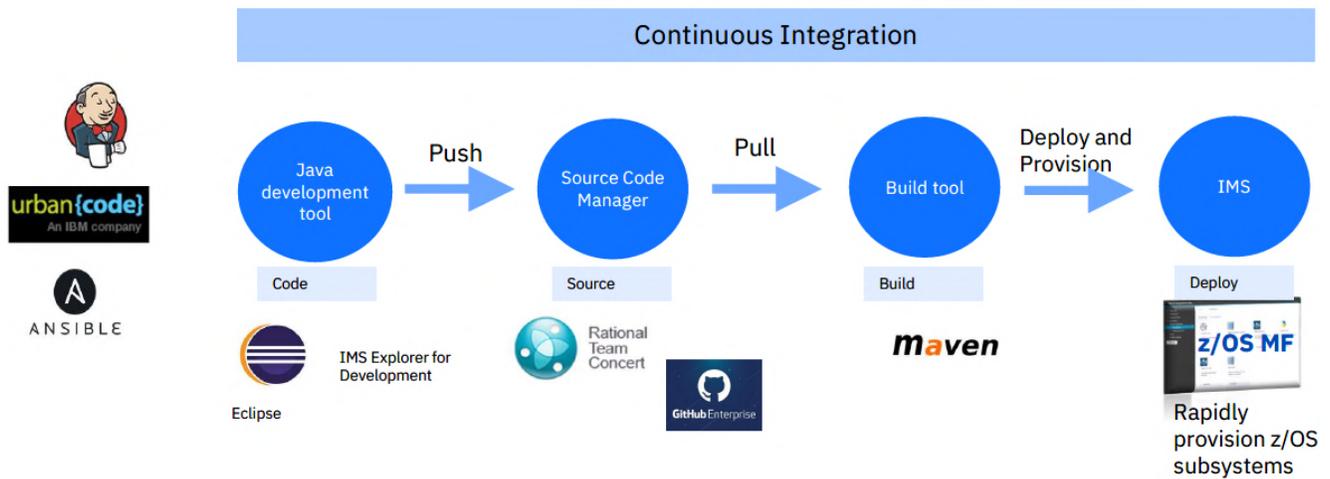
Figure 4: Sample Java DevOps pipeline

cloud, DevOps, and API/mobile usage and see the benefits.

Lastly, Betty Patterson looked at 'the what'. And, going back to Figure 1, identified the IBM applications that could help each persona in the work they needed to do.

Betty then went on to look at IMS assets as API, application agility with Java in IMS, rapid IMS provisioning and integrated DevOps, and Open IMS data access with JDBC and SQL.

The top three reasons for transforming IMS with APIs are: to make your IMS assets more open and modern in the API economy; to ease integration within or outside your company with minimal mainframe skills; and to reduce development costs with minimal to no programming required.

If mainframe assets are described and discoverable as Open APIs, they are just like any other APIs. It then requires no mainframe skills to use mainframe apps as APIs. You can expose IMS and z/OS assets as RESTful APIs without writing any code.

The top three reasons for transforming IMS with Java are: skills are easy to find for Java and tools; you can make your IMS applications more maintainable and cost-effective; and it's DevOps ready for continuous integration with most enterprise DevOps pipelines.

The top three reasons for transforming IMS with DevOps are: the continuous delivery and integration of DevOps with mainframe assets; to enable cloud-like provisioning and configuration with IMS; and

self-service application development and deployment with no mainframe skills. A sample Java DevOps pipeline is shown in Figure 4.

The top three reasons for transforming IMS with Open Database are: to make your IMS data more accessible; to provide instant data access with reduced latency and elimination of ETL; and there are abundant Java and SQL skills and tools.

A copy of Betty Patterson Bucci's presentation is available for download from the Virtual IMS user group Web site at www.fundi.com/virtualims/presentations/IMSDXJul18.pdf.

You can see and hear the whole user group meeting by downloading the WMV file from www.fundi.com/virtualcics/presentations/2018-07-17meeting.wmv.

Meeting dates

- On 14 August 2018, David Mierowsky, Managing Director of Fundi Software, will be discussing, "A smarter way to manage and configure your IMS Systems".

- The following meeting will be on 9 October 2018, when Rosemary Galvan, IMS Tools Solution Advisor at Rocket Software will be asking you to "Rethink The Way You Manage IMS".

Recent IMS articles

IMS at 50 by Trevor Eddolls on IT Toolbox (1 July 2018). You can find the article at https://it.toolbox.com/blogs/trevoreddolls/ims-at-50-070118

A Reliable Transaction Management System by Emily Siu and Jack Yuan in *IBM Systems Magazine* (June 2018).You can find the article at http://ibmsystemsmag.com/

mainframe/storage/data-management/transaction-management-system/

Accessing IMS TM and DB with Spring Boot by Denis Gäbler on z Systems Developer Community (30 May 2018).You can find the article at https://developer.ibm.com/zsystems/2018/05/30/ims-springboot/

IMS 50th Celebration CONTEST – It's Your Chance for Fame and SWAG by Sandy Sherrill on z Systems Developer Community (9 May 2018). You can find the article at https://developer.ibm.com/zsystems/2018/05/09/ims-50th-celebration-contest-chance-fame-swag/

Secure your ODBM threads without disrupting IMS regions by Joseph Leamon on z Systems Developer Community (4 May 2018). You can find the article at https://developer.ibm.com/zsystems/2018/05/04/secure-odbm-threads-without-disrupting-ims-regions/

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About the Virtual IMS user group

The Virtual IMS user group was established as a way for individuals using IBM's IMS hierarchical database and transaction processing systems to exchange information, learn new techniques, and advance their skills with the product

The Web site at www.fundi.com/virtualims provides a central point for coordinating periodic meetings (which contain technically-oriented topics presented in a webinar format), and provides articles, discussions, links, and other resources of interest to IBM IMS practitioners. Anyone with an interest in IMS is welcome to join the Virtual IMS user group and share in the knowledge exchange.

To share ideas, and for further information, contact trevor@itech-ed.com.

The Virtual IMS user group is free to its members.