

# Where to now for BizTalk Server?

## Four Opportunities to Modernise Your Enterprise Integration Platform

DISCUSSION PAPER

### Preface

The last few years have seen seismic shifts in B2C and B2B technology landscape, affecting every aspect of enterprise IT environments that rely exclusively on Microsoft's battle-tested BizTalk Server for core on-premises EAI, SOA and ESB integration capabilities.

The cloud has begun to deliver on its promises of significant benefits, from real-time data-driven insights, to 24/7 availability and infrastructural elasticity via the scalability of Infrastructure-as-a-Service (IaaS) and Platform-as-a-Service (PaaS) computing.

As such, market forces are steering organisations towards a more comprehensive embrace of digital technologies, with the result that demands for greater integration of devices and services continue to increase.

Consequently, a number of trends have emerged in the enterprise environment, each offering specific benefits and challenges. Many businesses that leverage BizTalk Server today are grappling with the profound operational and integration challenges such developments have entailed, including:

- Demands on processing scale without over-investment in on-premises infrastructure

- The need for Enterprise IT to rapidly respond to changing business needs with a faster time to value
- The need to maintain business continuity across an ever-proliferating number of business applications both on-premises and in the cloud
- The contentious security agreements required to expose connectivity in the data centre for external-facing integration capabilities.

As identified in a 2014 Gartner research paper on 'Bi-Modal IT'<sup>1</sup>, the fundamental challenge for the enterprise is how best to both innovate with new capabilities to enhance business agility whilst maintaining enterprise-scale stability for existing mission-critical platforms.

This modern requirement to reconcile both flexible and fixed operating costs can become burdensome for many organisations, however shoulder the burden they must if they want to adapt to the new always-on, always-

connected customer landscape. This pressure is felt none more keenly than by proponents of traditional on-premises only integration approaches, who face strong competition from more modern cloud-based integration technologies such as Azure App Service<sup>2</sup>, Azure PowerApps<sup>3</sup>, or other less enterprise-capable citizen-integrator offerings.

Further, the need for real-time monitoring and analytics as part of an enterprise integration environment is growing ever more important. Triggered business events based on real-time analytics, decision engines and business rules within the integration platform all provide a rich source of information that can be visually represented through reporting dashboards and operational management platforms.

Finally, retaining the technical skills and competencies in-house required to deliver integration capabilities to their business stakeholders in this rapidly changing environment is becoming more and more difficult. If your existing integration platform and technology stack is not being invested in, then your organisational competency for delivering business value also falls behind with it.

The longer the time between updates, the bigger the technical hurdles to overcome when - not if - platform and application integration upgrades are deployed.

“ How does your organisation deal with new requirements from the business stakeholders? Do they have the patience for large, long and poorly-run IT projects? Would they prefer a simpler solution with faster time to value that can improve over time? ”

“ How does your organisation deal with more agile trading partners who are already participating in the Digital API-based economy? Does your organisation have the ability to on-board that partner without first having to run an internal IT project each time? ”

**Mexia** understands these challenges. That's why we exist. We simplify the complexity of delivering enterprise-scale integration solutions on-premises and in the cloud, and we've done it for some of the largest organisations in Australia. This paper shares insights from that integration experience to inform and help guide your organisation's integration strategy - in the near, medium or long-term. It highlights how to identify and overcome the operational challenges of cloud solutions, so that you may reap the benefits and enable your business to thrive.

<sup>1</sup> Bimodal IT: How to Be Digitally Agile Without Making a Mess, Gartner 2014. Available from <https://www.gartner.com/doc/2798217/bimodal-it-digitally-agile-making>

<sup>2</sup> <https://azure.microsoft.com/en-us/services/app-service/>

<sup>3</sup> <https://azure.microsoft.com/en-us/documentation/suites/powerapps/>

## HOW THE INTEGRATION WORLD IS CHANGING: Modernisation is essential

In late 2015 Microsoft released their 2016 Cloud Platform Roadmap<sup>4</sup> and 2016 Integration Roadmap<sup>5</sup>, where their commitment to BizTalk Server has been re-affirmed for another 10 years with the pending release of the 10th version, BizTalk Server 2016.

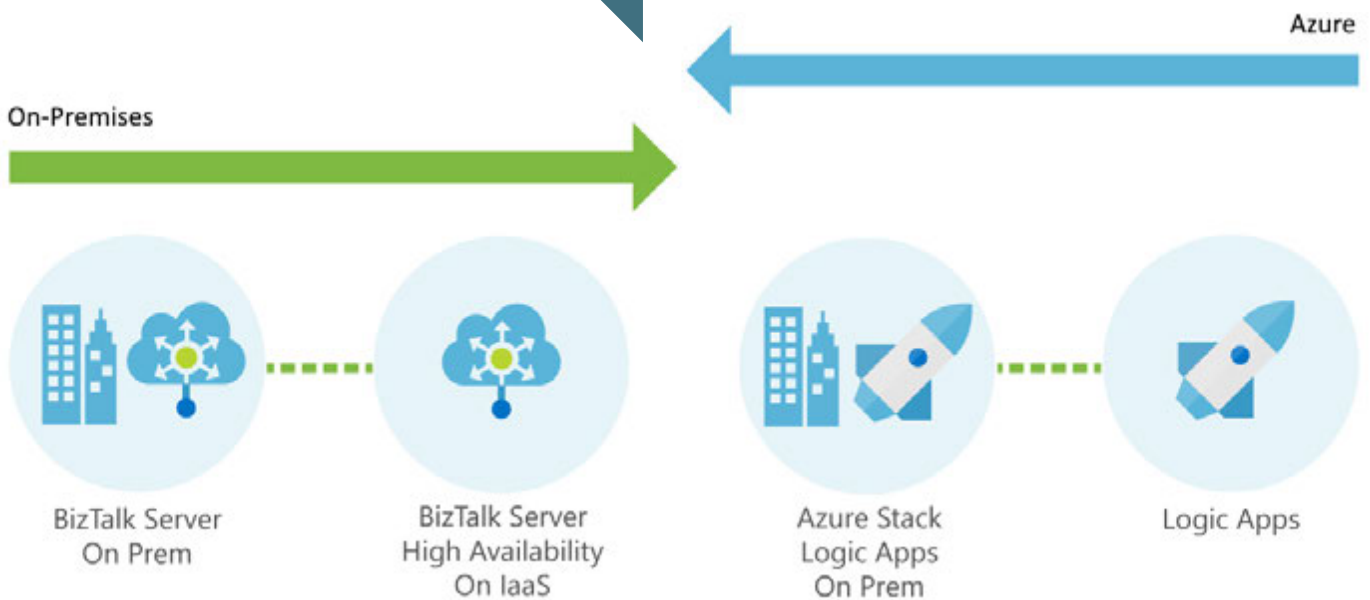
“ Whether you’re a start-up or a global enterprise, Microsoft are the only global product vendor with the on-premises server and cloud platform tools that you can trust to build a consistent, integrated and aligned solution that will still be running in 10 years time. ”

**Dean Robertson,**  
**Technical Director, Mexia**

In this world of rapidly-evolving technologies and a constant stream of new product vendors, very few companies have a committed to support for as long as 10 years. This means you can be confident that any investments you make are good for the long term, and now is the best time to consider your options on modernising your existing BizTalk Server environment. This can open up some tremendous opportunities for growth and innovation, allowing you to get the most from your existing BizTalk Server investments whilst also preparing for the future by extending your solution with Azure’s integration-focused PaaS capabilities.

<sup>4</sup> <https://www.microsoft.com/en-us/server-cloud/roadmap/>

<sup>5</sup> <https://www.microsoft.com/en-us/download/details.aspx?id=50408>



Location Flexibility. Source: Microsoft Integration Roadmap 1.0

To understand the value that can come from modernising your operating environment, it is important to get a sense of what trends are shaping decision-making now and in the near term.

Mexia has identified five key technology trends that are driving industry today. Each has profound implications

for your business, and each will require you to review the adequacy of your present BizTalk Server implementation to assess whether it can accommodate the changes these trends will usher in.

## 1 THE DIGITAL REVOLUTION: APIs & Mobility

The API economy is booming. With customer interfaces linking applications, services, and systems, APIs can help businesses to better harness their data, improve the experience for the customer, and drive new revenue opportunities.

This pervasive connectivity has coincided with demand for ubiquitous mobility through the widespread adoption of mobile devices such as smartphones and tablets.

Customers now expect anytime access to their data, and to be able to search and share what they want, instantly, whenever they wish. The lines between personal and work devices have blurred, and the collaborative potentials of such connectivity have become increasingly evident.

Traditional boundaries within the enterprise are also being crossed in the rush to participate in the API-driven economy. Whereas architecture and technology implementation decisions were traditionally owned by enterprise IT, functioning in the interest of centralised control and supposed efficiency, all business areas can now add their own SaaS and PaaS-based solutions into the dark, unmanaged world of shadow IT.

Like a recalcitrant teenager constantly pushing at the boundaries of authority, the digital revolution is creating a sense of urgency in enterprise business, anxious for freedom from long technology procurement cycles and stale thinking. Modern enterprise companies need to adapt, or lose control forever.

## 2 INFRASTRUCTURE IS BECOMING A SERVICE: IaaS & iPaaS

As cloud technologies have evolved and hardware virtualisation has become more powerful, more companies have chosen to deploy their enterprise systems over the Internet through Infrastructure as a Service (IaaS).

Indeed, 2014 saw the absolute growth of public cloud IaaS workloads surpass the growth of on-premises workloads for the first time, according to Gartner<sup>6</sup>.

In many instances, IaaS can offer a better solution than having to run and maintain your own on-premises hardware. IaaS provides capacity to scale up or down relative to demand, and potential for reduced capital

operational expenditure depending on your circumstances.

Furthermore, we have seen the emergence of iPaaS (integrated Platform as a Service). iPaaS has allowed greater connectivity between cloud-based applications and on-premises or legacy applications, and is slowly supplanting typical integration middleware.

For those who have questions concerning these solutions, Mexia will soon be releasing a discussion paper that will examine the cost implications of these different integration platform choices.

## 3 INCREASED USE OF SaaS: redefining & refining core processes

Software-as-a-Service (SaaS) has been with us since the early 2000s, and has seen rapid adoption across all sectors. As a result, there are SaaS offerings for almost every type of application that can be imagined, and many companies have since migrated core business processes such as HR, payroll, and accounts to the cloud.

The benefits are obvious. With SaaS, there is no need to install and maintain software. There is near instant provisioning, and it is always available with little or no

downtime. Most significantly, it allows for anywhere access for employees, wherever there is Internet connection available.

The adoption of SaaS, however, changes the way integration is accomplished. Your legacy applications and hardware must be enabled to communicate with the cloud, if they are to continue to serve your needs in this dynamic environment.

<sup>6</sup> Gartner Says Worldwide Cloud Infrastructure-as-a-Service Spending to Grow 32.8 Percent in 2015' <http://www.gartner.com/newsroom/id/3055225>

## 4 SENSOR-BASED TECHNOLOGIES: The Internet of Things takes hold

The Internet of Things (IoT) has arrived. With its dramatic focus on machine-to-machine communication built on cloud-computing and data-gathering networked sensors, it promises to revolutionise everything from data analytics to supply-chain logistics. Indeed, 2016 will likely prove a watershed year for the technology.

Recent Forrester research reports that 27% of enterprises use IoT solutions today, with another 29% planning to

do so within 12 months. The reason? These enterprises have seen the opportunity to move away from one-time product transactions to ongoing product-as-a-service arrangements, to optimise their existing asset bases, and to experiment in new modes of customer engagement<sup>7</sup>.

With Gartner predicting 5.5 million new connections everyday in 2016<sup>8</sup>, your organisation will need to prepare for these emergent integration needs.

## 5 THE EMERGENCE OF BIMODAL IT: Marrying stability with agility

Traditional IT is on borrowed time. Since Gartner identified the potentials of bimodal IT<sup>9</sup>, organisations have increasingly begun to shape their IT strategies around this model in order to keep pace with the constant flux of the digital landscape.

This means two flavours of IT at the heart of your enterprise: one mode focused on stability and established efficiencies, the other on capabilities that emphasise experimentation and agility, to better meet the challenges of rapid application development and tight time-to-market targets.

It is about surmounting the legacy roadblocks, and giving your development operations team the tools and processes they need to innovate while ensuring the integrity of your existing platforms. Achieving the ideal outcome represents a significant integration challenge. Organisations that can strike the right balance between

the apparently dichotomous needs of bimodal IT will stand to benefit greatly.

Any one of these trends presents compelling reasons to seriously consider modernising your existing BizTalk Server integration environment. Taken together, they become imperative.

Recognising these trends is not enough though. You also need to know what your options are, how you can harness the opportunities, what the benefits will be and what are the risks you face. The next section examines the four approaches available to existing BizTalk Server users interested in taking the next step towards a modern approach to integration. It also explores the benefits of aligning with Microsoft roadmaps to take advantage of the industry-wide trends and transformations outlined above.

<sup>7</sup> Internet Of Things (IoT) Predictions From Forrester, Machina Research, WEF, Gartner, IDC, Forbes/Tech <http://www.forbes.com/sites/gilpress/2016/01/27/internet-of-things-iot-predictions-from-forrester-machina-research-wef-gartner-idc/#7b5c8db6be64>

<sup>8</sup> Gartner Says 6.4 Billion Connected "Things" Will Be in Use in 2016, Up 30 Percent From 2015, Gartner Newsroom <http://www.gartner.com/newsroom/id/3165317>

<sup>9</sup> Bimodal IT: How to Be Digitally Agile Without Making a Mess, Gartner 2014. Available from <https://www.gartner.com/doc/2798217/bimodal-it-digitally-agile-making>

## RECOMMENDATIONS: Opportunities for existing BizTalk Server environments.

Every business is different. You may have unique organisational challenges, regulatory compliance needs, legacy technology to wrangle with, competing strategic priorities or incumbent opinions to overcome. Your existing BizTalk Server integration platform may run entirely on-premises, wholly in the cloud, or via a hybrid deployment. So how can you best take advantage of the above technology trends with a robust enterprise integration strategy going forward?

Here are some key opportunities identified by Mexia where your organisation can harness these trends, ensuring agility - and stability - for the enterprise.

### OPPORTUNITY 1:

## UPGRADE & UPDATE

Upgrade your existing on-premises BizTalk Server environment

BizTalk Server seeks to fulfil Microsoft's vision of empowering every person and organisation to do more. The imminent launch of BizTalk Server 2016 in will bring greater parity with Azure, Visual Studio, Windows Server, SQL and Office, forming a robust product line-up for enterprise.



As outlined in their 2016 Integration Roadmap, Microsoft are reinforcing their commitment to BizTalk Server. The roadmap focuses on reducing the complexity of integration by embracing the growing movement towards step-based flows to automation, SaaS, web-centricity, and more, across cloud and on-premises configurations.

If you are hitting performance boundaries now, the performance increases to be seen in upgrading to new versions of both BizTalk and SQL Server will be evident. You will see improved connectivity, better hybrid integration with Azure and other cloud platforms, and enhanced platform support across Microsoft solutions.

**Among the key features that Microsoft have planned for the forthcoming BizTalk Server 2016 RTM due in Q4 are:**

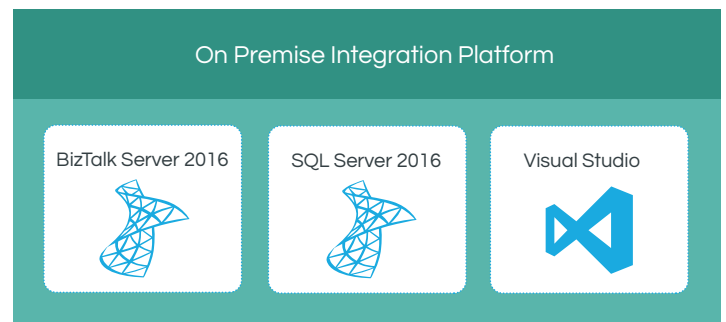
- Alignment with the latest releases of SQL Server 2016, Windows Server 2016 and Visual Studio 2015.
- Support for SQL Server 2016's AlwaysOn feature, providing improved disaster recovery capabilities.
- Better integration with API connectors to on-premises and cloud SaaS providers.
- Improved adapters and protocols for today's technology landscape.

Providing certain criteria have been met, you have the opportunity to initiate an in-place upgrade of your on-premises BizTalk Server deployment without having to

provision entirely new hardware and infrastructure. This will allow you to take advantage of improved performance, enable greater platform alignment with your underlying Microsoft server environment, and provide compatibility with modern Visual Studio and Application Lifecycle Management (ALM) practices.

**This in-place upgrade will be of greatest benefit if**

- a) Most of your integration workload will remain on-premises in the near future
- b) You already have the server infrastructure investment to host the platform, and
- c) You have the expertise to manage and maintain the uptime of that environment.
- d) You have a solid BizTalk investment but you want to open up new use cases with the latest features such as talking to modern API and SaaS based applications.



**CASE IN POINT:**



When Unisuper were looking to re-platform their existing BizTalk Server environment in 2015 as part of their Digital Transformation initiatives, they turned to Mexia to upgrade all of their developer, test and production BizTalk environments to take advantage of Windows Server, SQL Server and Visual Studio platform alignment. Their new highly-available BizTalk Server production environment is now securely and efficiently processing B2B and B2C integration workloads with external partners, customers and external SaaS platforms, ensuring Unisuper can participate in the new digital economy.

“ In addition to improving customer experience, we've made significant cost savings. The biggest benefit for us is the fact we now have a solid platform for future growth, making it easy to add new channels to consume additional services ”

**Sunil Dargani,**  
Integration Services Manager, Unisuper

OPPORTUNITY 2:

## CLOUD-HOSTED

Host your BizTalk Server environment in Azure

Rather than run your integration environment on-premises, you may decide to “lift’n’shift” your existing BizTalk Server environment to an Azure IaaS server environment.

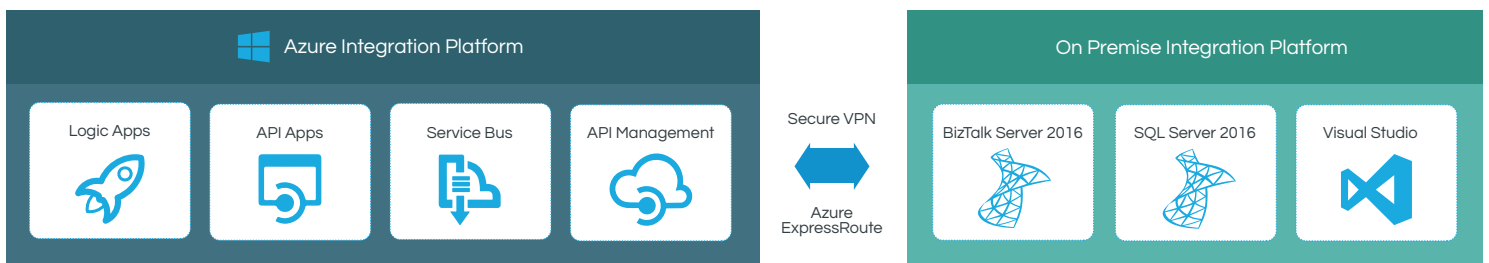


As with extending your BizTalk Server environment to Azure as outlined below in Opportunity 3, re-platforming to Azure enables your enterprise integration capability to also leverage Azure API Management, Azure App Services, and Azure Service Bus capabilities as part of an overall cloud-hosted integration platform. Most importantly, reconnecting on-premises via this approach means your legacy applications continue as-before, unaware that the underlying environment has been re-platformed.



### The benefits of this opportunity include:

- Taking advantage of the Windows Server, SQL Server and BizTalk Server application modernisation without having to tackle the complexity of on-premises infrastructure changes
- Taking advantage of any existing BizTalk Server & SQL Server licences you may already own through the licence mobility terms of your agreement with Microsoft
- Having the ability to scale server performance as needed for transient workloads and peak periods
- Paying only for the IaaS configuration you need to run your modern integration platform in Azure, rather than having to pay for all the additional salaries, licences, hardware and operating costs associated with on-premises infrastructure.



### This opportunity provides the greatest potential if you are looking to

- Integrate with a number of vendors external to your organisation
- Avoid significant additional capital outlay on new server infrastructure
- Circumvent the complicated negotiations required to upgrade on-premises infrastructure in large enterprise organisations.

### CASE IN POINT:



CPA is one of Australia's largest accounting bodies, with over 155,000 members working in 118 countries. When they sought to implement key business systems organisation-wide, they turned to Mexia to enhance their existing BizTalk implementation and transition to Azure IaaS hosting.

With our agile, structured methodology and integration consulting frameworks, we helped CPA achieve a superior solution while reducing the original project budget by 30%.

“ This integration platform has given us a new level of flexibility. It has allowed us to deliver on our strategy, and continue improving the experience we offer to members. Mexia provided ongoing support and valuable recommendations throughout the project such as alternative solutions to maintain security at decreased cost, and other recommendations to lower the complexity in our network architecture. ”

**Peter Harrison,**  
Architecture and Strategy Manager, CPA Australia



OPPORTUNITY 3:

## HYBRID INTEGRATION PLATFORM

### Extend your existing BizTalk Server environment to Azure

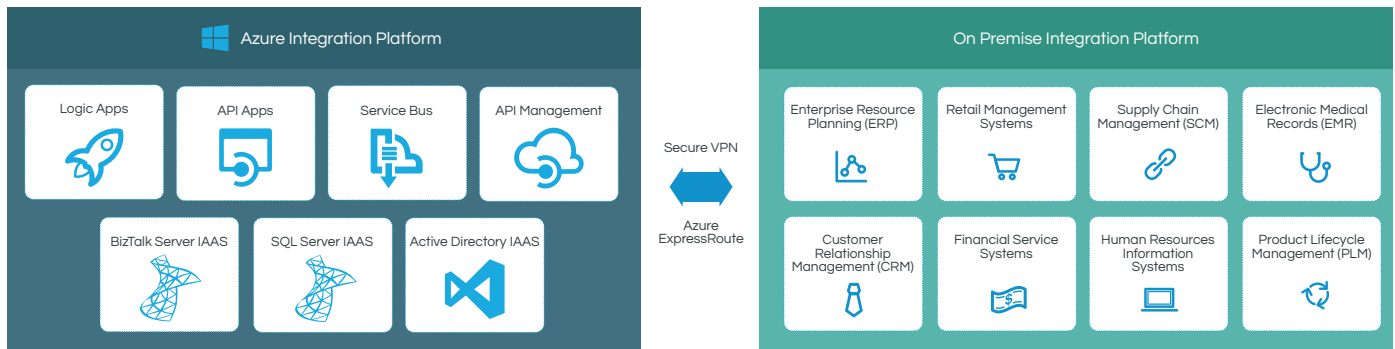
As an alternative (or in addition) to modernising your on-premises BizTalk Server environment, you can easily take advantage of the Azure integration technologies by securely connect your existing network environment to your deployed integration resources in Microsoft Azure data centres.

This not only allows you to embrace all of the benefits of Azure Service Bus, App Service and API Management for secure connectivity to partners, customers and cloud SaaS platforms, but can also leave your existing on-premises investments and integration solutions untouched if required.

One major attraction of this approach is that it allows an opportunity to capitalise on the advantages of integration with the Microsoft Azure platform and Microsoft App Service, a fully managed platform that includes:

- Web Apps: quickly create and deploy mission critical web-apps that scale with your business
- Mobile Apps: engage employees, partners and customers on any device, any time
- API Apps: easily build and consume Cloud APIs, and
- Logic Apps: automate access and use of data across clouds without writing code<sup>10</sup>It also facilitates integration with Azure API Management, allowing you to publish web services as APIs securely and at scale; and Azure Service Bus, a cloud-based messaging system for connecting almost anything - apps, services, and devices - wherever they are, including on-premises applications to the cloud.

In light of the key trends identified earlier, the potential of



this opportunity becomes obvious. Extending your existing BizTalk Server environment to Azure enables:

- Your existing on-premises Line of Business (LOB) systems to take part in the modern digital API economy without the need to also re-platform or modernise those systems
- Secure access to your environment via Azure API Management for policy-driven authorisation & authentication to your on-premises API's, either via ExpressRoute or redundant VPN connection
- The ability to process some of your integration workloads where they occur (either in the cloud or on-premises) without the need to make unnecessary network round trips through your perimeter firewalls
- Gradual re-platforming of your integration workloads to Azure-hosted IaaS and PaaS solutions over time, slowly reducing the time and effort spent administering and maintaining your on-premises infrastructure and services
- Implementation of bi-modal capabilities that can deliver both agility and stability across enterprise IT
- Exposure of your on-premises integration environment to amazing cloud services such as Application Insights<sup>11</sup>, Cortana<sup>12</sup> Analytics<sup>13</sup> and PowerBI, to gain valuable insights into your business which might currently be hidden away due the lack of on-premises data analytics tools.

#### This approach to extending your integration platform to Azure will be of greatest benefit if

- a) An increasing number of your integration workloads involve external partners, customers and cloud SaaS platforms
- b) You have a significant investment in your on-premises BizTalk environment and can't justify replacing or re-platforming to Azure at this time
- c) You'd like to take advantage of the rapid delivery timeframes that the Azure PaaS environment can offer
- d) You want to have the widest possible integration toolkit to cover any possible integration scenario.

<sup>10</sup> "What is Azure App Service?", from <https://azure.microsoft.com/en-us/documentation/articles/app-service-value-prop-what-is/>

<sup>11</sup> <https://azure.microsoft.com/en-us/services/application-insights/>

<sup>12</sup> <https://www.microsoft.com/en-au/server-cloud/cortana-analytics-suite/overview.aspx>

<sup>13</sup> <https://powerbi.microsoft.com/en-us/>



#### OPPORTUNITY 4:

## DEV & TEST IN THE CLOUD

### Adopt Modern ALM Practices

Application Lifecycle Management (ALM) is the hidden but pervasive load in most IT organisations, spanning development environments, source control, test environment provisioning, deployment scripting, testing, upgrades, change management, release documentation and service decommissioning.

Mexia understands this complexity and is able to move many of components of your BizTalk-focused ALM capability to cloud resources that can flex up and down to meet demand and only pay for the service you use.

Based on Microsoft's Visual Studio Team Services configured for your environment using Mexia's collective years of know-how, frameworks and tools, the advantages ~~are~~ can be considerable:

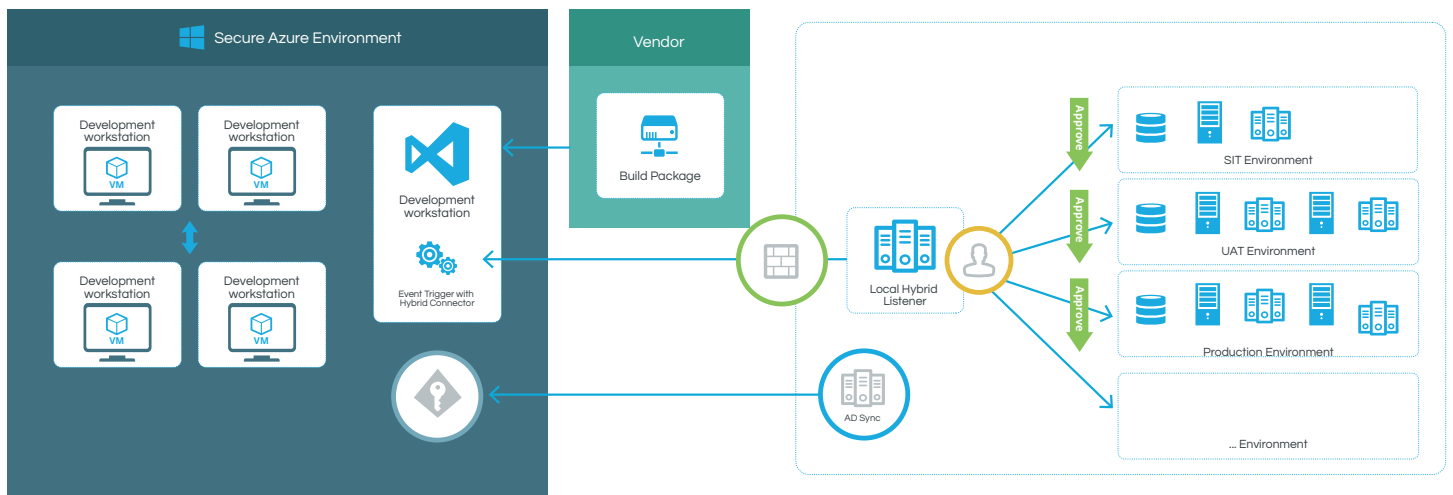
- Source code repositories in Azure, with flex capacity to grow as and when you need it
- BizTalk Server focused build automation
- Unit testing in sandbox Azure IaaS test environments to assess whether new code works effectively
- End-to-end BizTalk test automation with volume & surge generation to meet any test load challenge
- Mocked out test services so development engineers can test software safely and efficiently before release without needing on-premises connectivity
- Automated deployment of tested & approved deployment packages through web-based portals
- Customisable build workflows and versioning schemes for efficient upgrade & rollback processes
- Easy automated deployment of software updates to all dev & test environments to ensure end-users always have access to the latest current resources
- Automated management of software licences, with the

ability to redeploy available licenses dynamically and negotiate with software vendors based on real-time licence reporting.

**Mexia's ALM-as-a-Service capabilities provides the greatest opportunity if you are looking to**

- a) Modernise your approach to ALM to take advantage of full process automation for repeatability, auditability and consistency
- b) Ensure multiple vendors all leverage a consistent ALM platform when delivering consistent, managed & secure code packages into your environment

- c) Get started rapidly on new integration projects without having to wait for on-premises dev-test environment provisioning cycles to complete
- d) Maintain a smaller internal development team that easily scales up using resource/consulting partners, and you don't want to carry the costs of additional developer servers and MSDN licences
- e) Manage multiple side-by-side development and test environments to support migration and parallel project delivery projects without the associated on-premises infrastructure costs.



**Channel**  
**KNOW YOUR OPTIONS.**  
**CONTROL YOUR OUTCOMES**

As can be seen, regardless of the nature of your current environment there are a number of options for modernising your integration platform, depending on which approach best meets the specific challenges that your organisation is looking to overcome.

If you have questions, we have answers – and if you're looking to step up your integration game, Mexia is ready to engage. We know the pitfalls and possibilities better than anyone, and will help you attain the outcomes everyone is chasing.



The name Mexia is a play on the widely-used industry term “MEX” for message exchange. Originally specialising in building enterprise on-premises integration solutions with Microsoft BizTalk Server, Mexia was an early adopter of cloud computing. Now, we’re also an Australian leader in integration, API and internet-of-things (IoT) solutions using the Microsoft Azure cloud platform.

Mexia is a world-class integration consultancy demonstrating consistent growth year after year, recognition in the BRW Fast 100 for 3 years in a row, and were recent inclusions in the Deloitte Australia Fast 50 and CRN Fast 50 awards.

Mexia combines a deeply talented team of integration specialists with a structured delivery methodology and proven technologies to take you from solution design to managed go-live with a minimum of hassle. We will lead from the front to engineer the best outcome for your business.

World-class technical excellence. A deep focus on customer service and outcomes. A champion team that lives and breathes innovation.

**This is Mexia.**



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