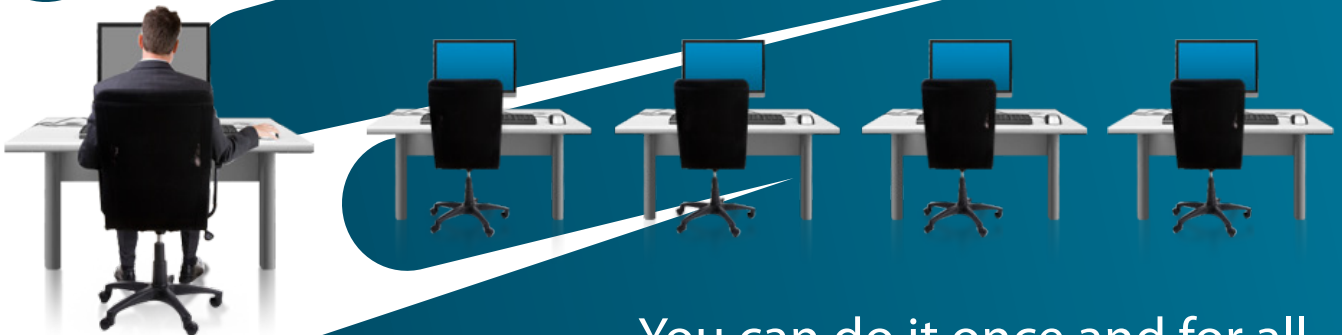




# Achieving ROI through Application Integration

Meeting the desktop challenges of  
complex IT environments



You can do it once and for all

# Achieving ROI through Application Integration

## Meeting the desktop challenges of complex IT environments

IDC estimates that 50%-70% of the money businesses spend on software goes towards software administration, support and maintenance. What would you estimate the percentage is for your business?

This 2-part white paper examines ways you can optimise your software management once and for all, with a particular focus on the associated installation, integration and migration of applications into an existing environment. It includes examples that demonstrate cost reduction, improved ROI & TCO, and technological innovation capable of delivering greater desktop-user satisfaction by leveraging a business's intellectual capital.

### Part 1

**Benefits:** The business benefits of efficient applications delivery and management to the desktop.

### Part 2

**Insight:** Technical and life cycle insights from one of the world's leading innovators in application packaging and integration services.



## Part 1 - Benefits:

Gen-i's Application Packaging & Integration services (such as wrAPP) can produce substantial 'cost-out' opportunities and outstanding ROI and TCO that will enable organisations to gain a competitive edge in desktop migrations and user satisfaction.

Here are two case study snapshots where application packaging deployment produced substantial ROI, major bottom-line impact and quantifiably improved business performance for clients of vastly different sizes:

### Case Study 1:

Reducing Application Time to the Desktop  
**Industry Segment: Banking, Financial Services & Insurance**  
Seats: 10,000+

#### Achievements:

- 250 applications, packaged to industry standard format ensuring consistent configuration, installation and un-installation
- Predictable cost due to the service delivering a fixed price per application
- Seamless integration with established release management processes
- Transitioned to BAU to support
- Solution ROI met within the first month of deployment

#### Results (post-deployment):

- Application Discovery time halved through formal process
- Packaging time reduced by 40%
- Application related Service Desk issues reduced by 90% within 3 months!
- Saving of more than \$1.5 million per year in service desk and maintenance time.

**Total ROI (ratio of benefit to cost in one year): 23:1**

### Case Study 2:

Application Rationalisation, OS Migration and Deployment  
**Industry Segment: NSW Government**  
Seats: 2,000+

#### Achievements:

- Rationalisation of corporate applications from a discovered 4000 down to 150
- 150 applications packaged to industry standard format ensuring consistent configuration, installation and un-installation
- Packaging of applications for both Desktop and Citrix environments
- Establishment of a clearly defined Programme Charter, Management Plan, Communication Plan and Deployment Plan

#### Results (post-deployment):

- Clear understanding of all software currently installed within the environment to enable rationalisation and enable license compliance
- Packaging time reduced by 60%
- Saving of more than \$1.1 million per year in service desk and maintenance time.

#### The key benefits of wrAPP and Gen-i's other application packaging and integration services:

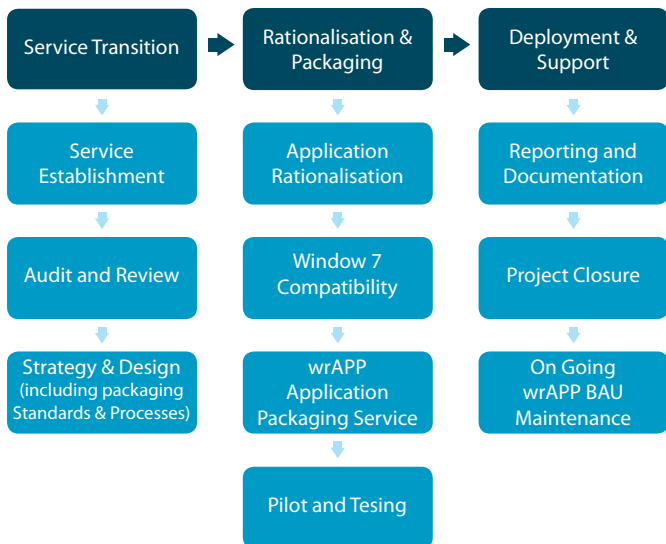
- Fixed price, cost certainty and optimal resource planning
- Lowered cost and increased ROI
- Improved desktop TCO
- Faster speed of response and delivery due to economies of scale
- IT resources and budget is freed-up for more pertinent projects
- Easy to use web portal with traceable request system
- Expert packaging engineers on every request
- Reliable and consistent software packages due to QA automation and conflict resolution
- Multi-platform support, eg. Windows 7, Vista, XP
- Access to virtualisation technologies, eg. Citrix XenApp, Microsoft App-V, VMware ThinAPP and Symantec SVS.

Gen-i's research & development into active application packaging, integration and application virtualisation technologies are highly regarded by Microsoft, VMWare & Citrix, as well as an enviable list of major organisations who have adopted the benefits of our

software packaging and integration services. These include;

**Westpac, Jetstar, Zurich, IAG, Promina, BT Financial Group, Australian Securities and Investment Commission (ASIC), Deloitte, Department of Environment and Climate Change, OfficeMax, ASX and Minter Ellison.**

### Gen-i wrAPP for Windows 7 Migrations



### The Gen-i wrAPP solution is based on these core principles:

**Quality** - Expert technical and management resources utilising industry best practice and Gen-i internal intellectual property automation and processes. Time saving, accurate automation techniques for OS imaging and application packaging (QA and testing).

**Certainty** - Offer the reassurance of a fixed price per package and standard price engagements, giving greater control over costs per project.

**Flexibility** - Allow for the reality of changing project requirements, by ensuring agility within the operational support team and all processes.

**Locality** - Because not all applications can be packaged offsite, ensure the same technical consultants involved on the project are available for on-site application engagements, ensuring the assurance of face-to-face interaction when necessary.

(IDC, Worldwide Windows Client Operating Environment 2009–2013 Forecast: Windows Vista to Give Way to Windows 7, May 2009)

**Modular Integration** - Go beyond packaging applications. wrAPP can also assist in the development of an SOE image, perform inventory assessments, capture application settings and user data, assist in the rationalisation and Windows 7-compatibility of a client’s current application set, provide application virtualisation assistance, develop best practice through packaging standards and processes, or ensure quality assurance of existing applications in your repository.

**Continued Support** - Following a successful migration, all the elements (eg. standard images, software packages, packaging standards and process, etc.) necessary for effective on-going management will be in place. Gen-i wrAPP allows clients to leverage this investment and to continue to secure and manage their IT resources long after a migration is complete.

### 3 main factors elevating the importance of application migration and integration, and the need for improved performance:

1. Migration to Windows 7 is top of mind in many organisations. The race to migrate is accelerating by the day. Generally, our industry’s reaction to Windows 7 has been much more positive than it was to Vista, since it’s release in October 2009 Windows 7 has had substantial uptake and has maintained significant market confidence.

IDC estimates that, in 2010, Windows 7 will account for 49.5% of Windows operating systems bought by corporations, or nearly 58 million copies.

2. Microsoft has announced ‘end of life’ support for Windows XP in 2011. This is a compelling time frame, and the next 2 years are critical to the planning of operating system migration.
3. Many desktops work on ageing platforms, and this continues to frustrate and hinder users. Enhancing enterprise-wide desktop user satisfaction via the capabilities of the in-house IT team can be a major challenge at the best of times.

To best harness your enterprise’s intellectual capital, increase agility, deploy innovation and deliver competitive edge, we ensure you have a 3-tiered path to high-impact business outcomes, with outstanding ROI, in very immediate timeframes.

## Part 2 - Insight:



Technical and life cycle insights from one of the leading innovators in application packaging and integration services, Mr. Adrian Lara.

Adrian Lara is a technologist with 12 years' experience in areas including systems administration, migration planning, software management and architecture design, distributed systems development and deployment, integration technologies and processes, cloud computing, and virtualisation. Adrian is currently the Design Authority for Application Delivery and Desktop for Gen-i Australia, currently focusing on enterprise and SMB application management strategies for Windows 7 migrations.

Organisations are increasingly seeking new competitive advantages, and to increase their operational efficiency. Consequently, they are demanding that IT provide greater strategic value through the delivery and management of new applications, with extraordinary flexibility, in record times. As a result, enterprise architects are turning to a new breed of application delivery techniques such as application virtualisation combined with traditional application delivery technologies such as automated installations or packaged applications (utilising Microsoft's Windows Installer) to provide a wide variety of business functionality.

This approach helps IT to achieve business requirements by providing new capabilities and strategic value faster and more efficiently than ever before. It also presents many new integration, automation and resource efficiency challenges.

The release of Windows 7, and the long-awaited enforcement of Microsoft UAC (User Access Control), ensures application process managers will need to conduct the installation and operation of software in a secure and stable manner. This is a challenging situation for any organisation. It particularly requires the testing of applications for Windows 7 compatibility. It can be done using Microsoft's Application Compatibility Toolkit, but also requires an experienced application integration expert to make the required changes to the application package if there are any issues. Gen-i wrAPP provides that kind of specific service, as it is part of the Microsoft Application Compatibility Factory (ACF) Partners.

Software as a Service (SaaS) is providing new standards and challenges, changing the landscape of application delivery and application management.

When organisations become more accustomed to holding their data off site, SaaS will become the most cost effective way to access the applications they need. This commodity style 'pay as you need' paradigm shift is here to stay, and why wouldn't an organisation pay for only the resources, hardware and software they need, only when they need them?

After all, the only reason you have a desktop (hardware and operating system) is to run the applications that enable you to do whatever business you do. Yet the cost of all of this hardware, software and the cost of managing it all is ever increasing!

This shift has led to the 'Cloud' revolution where the following services and their associated resources, housed on remote servers, can be accessed as and when they're required, instead of being held on individual machines:

- SaaS – Software as a Service
- PaaS- Platform as a Service
- IaaS – Infrastructure as a Service



It will take a while before all applications to all organisations are serviced from the cloud. So there is still a vital need to have applications installed locally on workstations and servers, but this doesn't mean you can't have the same fixed price, 'pay as you need' benefits.

Aligning with this paradigm shift, our vision at Gen-i has been to create application integration and desktop services as commodities, to be bought and used as required in a simple, user friendly framework that appeases known customer 'pain-points'. For example:

Problem: "Need another 10 virtual desktops?"

Solution: "Create them on the fly."

Problem: "Need more storage?"

Solution: "Go online and rent it."

Problem: "Need the latest version of a particular application?"

Solution: "Download it when you need it, pre-configured"

When obtained through Gen-i, applications that require licensing can be purchased, packaged and configured for automated deployment and downloaded in minutes, ready to be deployed.

Most people have installed a piece of software at one time or another, with the experience ranging from very easy to downright infuriating. Simpler installations

usually ask only a few basic questions and feature a series of 'Next', 'Next', 'Next, buttons. But some of the more complex installations are enough to derail even the most sophisticated IT engineer.

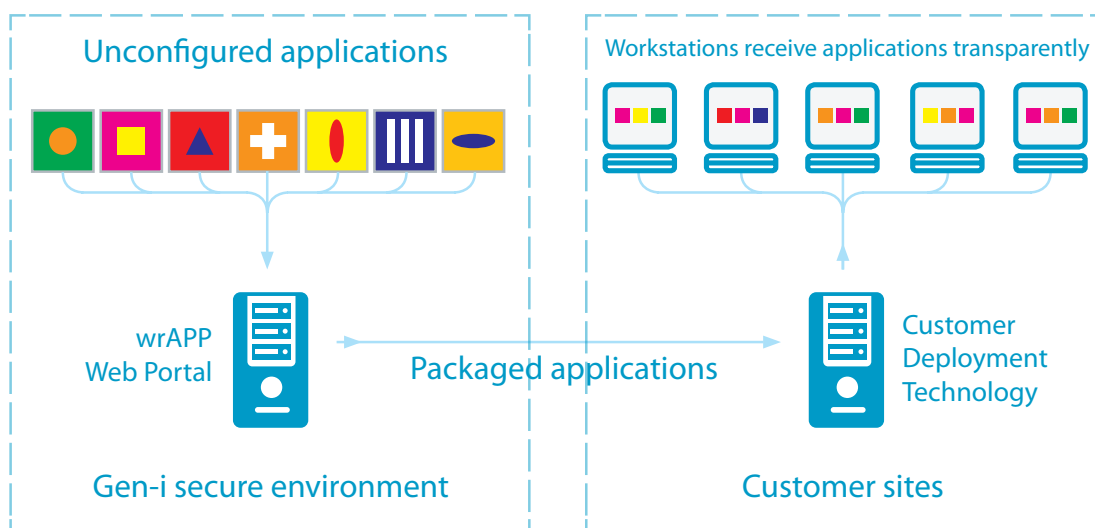
Because most applications are designed for a single user, this creates delivery headaches when trying to get the application onto 100 workstations. But it's simply not cost effective to have IT support walking around installing applications on workstations, whether there's 3 of them, or 3,000.

But imagine the savings possible if applications could be installed automatically? That was the goal when Microsoft attempted to alleviate some of the complexity of managing software installations back in the year 2000 with Windows Installer.

Suddenly, vendors and IT administrators had a standard way for applications to be pre-configured and set for automated installation. Using the .msi file format, this service is now present on Windows XP, Vista and Windows 7 operating systems, and is the de facto standard for installing software. But its legacy has been that major software vendors are increasingly creating their application installs in .msi format, which means application installation routines are becoming more standardised, and more commoditised.

With every install, you are taking several risks to your system and environment. You don't always know what other programs are installed with a given application, or indeed if your application is going to function with your data, not to mention the stability of your operating system or of other applications. But all of a sudden, a PC that was fine a few weeks ago is now running slowly and some applications don't behave like they used to.

### Gen-i wrAPP



## Why do computers suddenly run slowly, and applications don't behave like they used to?

Computers are simple state machines. But with every change or untested installation, you are changing the state of a PC. New installations copy their files over the existing ones (especially .dll's or .ocx's) that old applications rely on, in some cases with catastrophic consequences ("DLL Hell"). The simple reality is that you have a finite time before an inevitable problem arises.

Large organisations cannot take this risk and therefore they create desktop and application teams to test and configure applications. In most situations, the aim is for a completely automated and configured deployment of a given application that has been cross checked or 'co-existence tested' for application compatibility with the target operating system, as well as with other key, previously-installed applications. This type of application pre-configuration is usually referred to as 'application packaging.'

Automated installations, or packages, must meet the installation requirements for a specific environment: corporate standards for software usage and desktop design, multiple languages, regional issues, and software-related support issues. In addition, packages must be prepared for both commercial software and applications developed in-house.

Typically, the automating, packaging and managing of applications resides at the Enterprise level. But with today's innovations for application virtualisation and application installations, small companies also have the opportunity to take advantage of the same cost savings, timeframe reductions, enhanced security and heightened performance that large companies aim for.

## Everyone should be taking software management seriously. We do.



Whatever size organisation you work for, there is no doubt your desktop will be comprised of at least 20 core applications (eg. Adobe Reader, Java, Flash, Shockwave, Microsoft .net, a Web Browser or two, various , etc) and around 10 critical business

applications (Word, Excel, Outlook or Lotus Notes, financial applications, data processing, inventory tracking, etc.).

Most companies have 50-60 applications, and larger organisations have 300+. Recently a very large government body announced it found 3000 applications the CIO never realised it had!

Nowadays, every business is completely dependent on the use of applications to run their day to day operations, and it's a wonder why this hasn't been a primary focus of IT support.

## Achieving efficient, cost-effective application deployment and software management can have a significant impact on operational and support costs.

Application packaging can be an important element for efficiently managing the increased volume of software on desktop and notebook systems. By streamlining software installations, un-installations, repairs and patching, application packaging and application virtualisation can help reduce costs associated with each phase of the application deployment and support life cycle.

By enabling fast, standardised software installations, application packaging is designed to minimise desk-side visits by support staff, and avoid business disruptions caused by software failure—thereby helping to reduce costs for both IT support and business operations. When implemented as an IT best practice, application packaging can help create a cost-effective software repository that is in line with overall business priorities.

## Application virtualisation

Introduces further portability, manageability and compatibility of applications by encapsulating them from the underlying operating system on which they are run (a virtualised application is not installed, but is still executed as if it is).

The application is tricked at runtime into believing that it is running normally by a virtualisation agent that is either installed as a client on the target desktop, or hidden within the virtual application package. This

virtualisation agent acts as the interrupter between that application and the operating system so that neither is the wiser.

Application virtualisation provides considerable advantages over any previous technology, especially the ability to have multiple versions of the same application run on a desktop or server at the same time.

Application virtualisation enables and incentivises organisations to move to the latest Microsoft operating system, Windows 7, utilising technologies such as App-V and Med-V, combined with the Microsoft Application Compatibility Toolkit (MACT) and the Standard User Analyser (SUA).

These allow all applications to be accommodated and configured to conform to the Windows 7 Standard Security Model Standard. For troublesome applications, SUA can identify and fix application/user permissions, adding shims and elevating access privileges.

Other remediation options include upgrading to the latest version, which more than likely nowadays is Windows 7-compliant. Even the Windows 7 operating system has a native local file and registry virtualisation component. And if complete virtualisation is required, then of course application virtualisation technologies such as Microsoft App-V, VMware ThinAPP, or Citrix XenAPP Application streaming can be used.

Furthermore, there is even the option to simulate an XP operating system by integrating a virtual XP O.S.,

invisibly held within Windows 7 (known as XP Mode), that can be managed remotely using Microsoft MED-V.

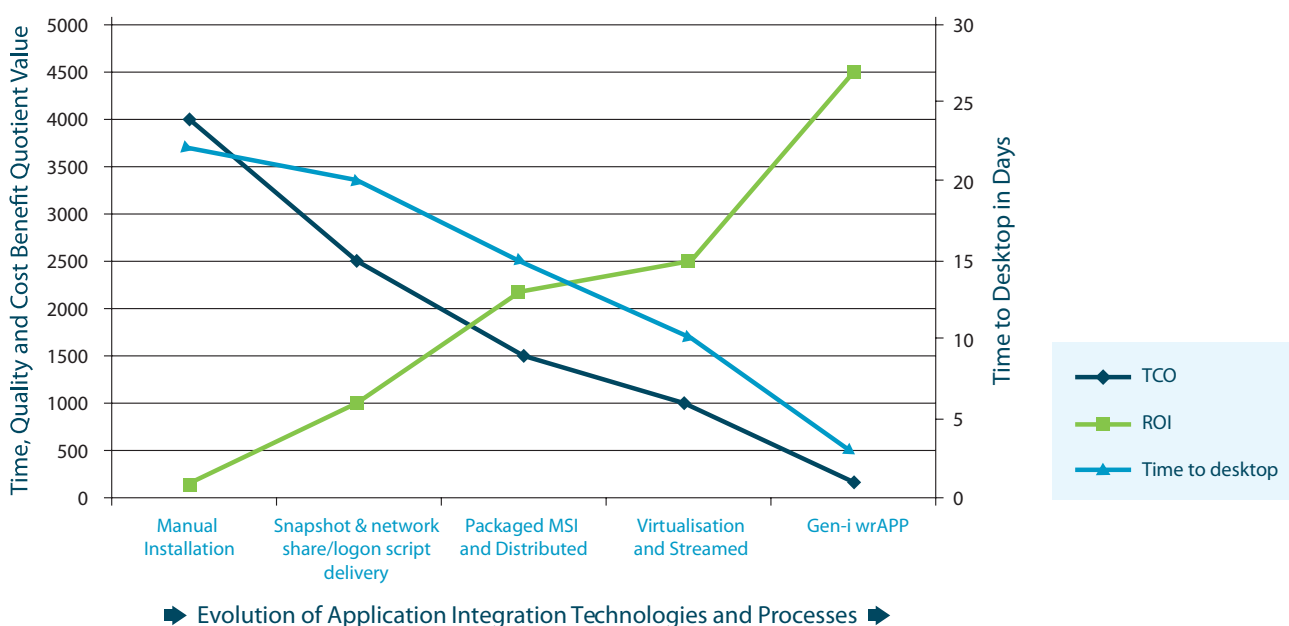
All of these options provide much greater control and flexibility when designing a solution to deliver a given application. A combination of these technologies will be common place in most organisations in the near future and should be incorporated into every organisation's software management policy or framework.

What this does not simplify is the layers of complexity now emerging from managing all these new technologies, and the amount of and quality of knowledge required. Companies will require a much more rigorous focus on software management and application integration as a whole.

Understanding this, we are trying to simplify these requirements to provide flexible services that complement large organisations in times of application volume, or helping to resource and enable smaller organisations so they too can enjoy the benefits of the latest technologies and best practices, at a fraction of the cost.

The graph shows (in chronological order) a quantification of the benefits of changing technologies and methodologies. It features what we call the Time, Quality and Cost Benefit Quotient. It incorporates the relative value associated with Return on Investment (ROI) and Total Cost of Ownership (TCO) with the user's and project stakeholder's favourite, the all important 'time to desktop.'

Changing Landscape of Corporate Application Integration & Management



This example is based on a single application that needs to be distributed to 100 desktops. It includes scoping and assessment, rationalisation, pre-test installing/uninstall, configuring, packaging, testing (including SOE sociability and basic functional testing), documenting & management overheads. The graph illustrates that, as technology advances, ROI increases, and both TCO and the time taken for an application to get to the desktop of end users is reduced. By enabling fast, standardised software installations, application packaging is designed to minimise desk-side visits by support staff, and avoid business disruptions caused by software failure—thereby helping to reduce costs for both IT support and business operations. When implemented as an IT best practice, application packaging can help create a cost-effective software repository that is in line with overall business priorities.

## The landscape for desktop and software management is changing.

- Multiple aspects of application delivery are all attempting to provide greater control and flexibility in accordance with one primary goal: to cost-effectively provide the applications organisations need to run their business.
- New technologies such as application and desktop virtualisation reduce the time taken to prepare applications for delivery to end-users.
- Vendor conformity to the Windows Installer standard enables faster and more accurate ways of pre-configuring their application installs in .msi format.
- Windows 7 and the long awaited enforcement of Microsoft UAC (User Access Control) ensures the installation and operation of applications can occur in a secure and stable manner.
- SaaS (Software as a Service) and the general modern era of the commodity based 'pay as you need' mindset shift becomes increasingly prominent.

Gen-i's aim, like the aim of SaaS, is to reduce the time taken to deliver a chosen application to any size organisation to almost zero, while providing the leading expertise and quality in application integration and automation. To illustrate, when the new version of Adobe Reader comes out, we'll do the testing, configuration, packaging, virtual package testing, QA, and all the other work required to automate the installation for your environment. All you have to do

is download it and deploy in accordance with your company Change Control Process.

We employ industry best practices as well as our own innovation and ingenuity to develop, pre-test, configure, compile and package most mainstream applications so that there is the absolutely minimal waiting time.

**Eliminate the duplication associated with software maintenance, and get platform migration over and done with once and for all with Gen-i. To find out more about wrAPP and our other application packaging & integration services, speak to one of our account managers by calling:**

**1800 803 755 or visit [gen-i.com.au](http://gen-i.com.au)**