



Reducing Total Cost of Ownership Across Your Application Development and Database Tools

In today's economy, companies are suffering from slower demand, tighter operational controls and shrinking IT budgets and resources, prompting them to look for aggressive ways to cut costs and make their IT operations more efficient.



One implication of shrinking resources is that it has never been more timely or critical to understand the Total Cost of Ownership ("TCO") of software purchases." A TCO analysis helps an organization understand and manage the many inter-related direct and indirect costs involved in outfitting its users with the software applications they need. A thorough analysis considers not only direct costs, such as software licenses, maintenance, and required hardware, but also indirect costs, such as software asset management and compliance, desktop administration, software fixes, IT support, user training, and downtime.

Because current economic challenges and business requirements demand a closer scrutiny of all costs associated with software, organizations seeking to reduce costs need to look beyond simple software license and maintenance costs. In "The End of Software", Timothy Chou cites Gartner Inc., a global IT analyst firm tracking the high-tech market, as pointing to maintenance and administration costs to maintain the status quo. According to Chou, Gartner states that: "Customers can spend up to four times the cost of their software license per year to own and manage their applications". As a result, companies can end up spending more than 75% of their total IT budget on maintaining and running existing systems and software infrastructure¹.

When evaluating software costs, organizations must look at costs associated with the complete lifecycle of their applications, including, but not limited to, the evaluation, implementation, and management of those applications – in short, the TCO. They must consider not only license and maintenance costs, but also costs associated with installing, updating, uninstalling, provisioning, managing, regression testing, and certifying applications.

"Customers can spend up to four times the cost of their software license per year to own and manage their applications, says Gartner, Inc."

– Timothy Chou,
The End of Software



A TCO Comparison

The purpose of this paper is to help readers evaluate the TCO of the traditional software models versus the new model provided by Embarcadero® All-Access™. It will provide readers with a guideline for developing a TCO comparison that will help them determine which model is best for reducing both near-term and longer-term costs associated with their application development and database tools, as well as for making their IT operations more agile and efficient.

The first software model, which is likely the most familiar to IT organizations, is the traditional software model. In this model, users purchase and license software products as needed. Sometimes they are purchased a la carte and sometimes under a broader enterprise license agreement, but most are acquired under a non-expiring “perpetual” license agreement. Each product typically has its own maintenance contracts and lifecycle costs to manage, and organizations must deal with a large number of software and service suppliers.

The second software model is a new one recently introduced by Embarcadero in the form of its All-Access offering. With the All-Access model, users get a perpetual license to virtually all of the application and database development and management tools they need under an exceptionally cost-effective and easy-to-administer license. Embarcadero All-Access is unique not only in terms of its licensing simplicity and flexibility, but because it enables organizations that so desire to centrally implement, provision, manage, and report on license utilization from their own servers. It is also distinguished by the breadth and role-flexible nature of the tools. This allows even a single All-Access “tool chest” to serve multiple roles (application and database developers, architects, DBAs, and performance testers) and multiple platforms (all major DBMS platforms, programming languages, and frameworks). Finally, All-Access provides many of these tools under a new deployment model termed Embarcadero® InstantOn™. Called “application virtualization” by Gartner in the study cited here, the term is used to describe an operating feature whereby applications are packaged as a single executable and can be run via a single click from the client system. InstantOn eliminates the need for full, client-side installation and greatly simplifies deployment and version management.

This TCO comparison report will compare the traditional software model with the new Embarcadero All-Access model. It will examine direct costs as well as indirect costs that typically far exceed the direct costs of software ownership. The comparison will demonstrate how the All-Access model can reduce upfront capital expenses by 43% or more and also reduce the TCO for many software tools by 46% or more over three years.

...a traditional software implementation demonstrates that the standard software packages offered by most vendors not only require a higher up front capital investment, but also cost 43% more upfront than the All-Access solution and 46% more over three years.

TCO Expense Areas

To compare the TCO of the traditional software model with Embarcadero All-Access, there are three main expense areas to be considered¹:

- Capital Expenses
- Operating Expenses
- End-User Expenses

The following are the qualitative descriptions for each of these three areas.

Capital Expenses

- **Software Licenses:** Direct costs for software license purchases, per user and/or per workstation, CPU, server, etc.
- **Software Maintenance:** Traditional annual maintenance costs for acquired software. Software maintenance costs are estimated at 25% of the original purchase price per year for a three-year period.
- **New Hardware:** Purchase costs for new hardware.



- **Hardware Maintenance:** All costs associated with acquiring and maintaining hardware servers and other infrastructure components necessary to deploy, maintain, and manage the software. Hardware maintenance costs are estimated at 25% of the original purchase price per year for a three-year period.
- **IT Software:** Includes all the software needed to run and maintain the IT systems.

Operating Expenses

- **Tier 1-3 Support:** IT and Help Desk Operations associated with Tier 1-3 support.
- **Security:** Costs associated with keeping the applications and data secure.
- **Desktop Management:** Costs to manage the desktop operations, including:
 - License Allocation/Provisioning – administrative costs associated with allocating, de-allocating, and re-allocating licenses as project and staffing needs evolve.
 - Compliance – administrative costs related to license compliance: inventory, internal & external communication, true-ups, etc.
- **Administration:** FTEs and hours dedicated to deploying and administering the system, including the cost of packaging and deploying the software, and keeping it current with the latest updates. Also include costs for unscheduled maintenance and outage recovery of systems.
- **Management:** FTE costs to evaluate and acquire new software as well as managing upgrades and vendors. This includes:
 - Evaluation – cost of searching for the right software, conducting the requisite due diligence on vendors and products and comparing candidate solutions, vetting vendors and products with corporate architecture standards, etc.
 - Procurement – costs of processing an order, including negotiating a contract (legal), budgeting, order processing, accounting, etc.
 - Vendor Management – costs related to the initiation and ongoing cultivation of a vendor relationship, including administrative, legal, and operational: managing contracts, maintaining approved vendor lists, adapting to each vendor's support procedures, etc.
 - Budgeting – costs to optimize allocation of new licenses and licenses under maintenance to projects, departments, and business units. Also includes the cost of making special purchases outside of standard budgetary cycles.
- **User & IT Training:** Costs of ensuring that the personnel responsible for managing the software are equipped with the right knowledge. This primarily includes the groups responsible for first-tier support within the organization (Help Desk) and those groups responsible for deploying the software.
- **Disposal:** Costs to dispose of systems.

User Expenses

- **End-user Training:** Cost of user training. (Noting that a proper training plan will ensure that the various benefits – primarily productivity – that result from training substantially outweigh the direct and indirect costs of training.)
- **Fixing:** Costs associated with support, trouble-shooting, and fixing applications. This relates primarily to custom applications, where the company is responsible for maintaining its own software. This area is where the productivity benefits of software tooling are counted, together with the time spent troubleshooting software configuration issues in the tools themselves, which tends to increase with the number of tools and vendors.
- **Downtime:** Cost of downtime, including considerations for:
 - Time – costs of lost productivity while software evaluation, license allocation, and other parts of the process are taking place.
 - Other Inefficiencies – companies often pay a great deal for each tool, but are not able to maximize its use for a variety of reasons, including sub-optimal or infrequent use.



Embarcadero All-Access: An Overview

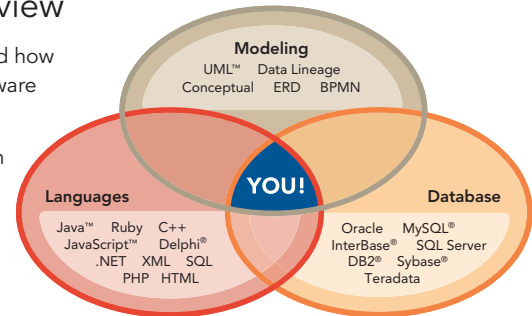
To aid with understanding the following TCO model and how Embarcadero All-Access helps reduce the TCO for software tooling, a short overview is needed.

Embarcadero All-Access is a relatively new offering from Embarcadero Technologies. It provides a complete and cost-effective software tool chest for database professionals and application developers – all with a simple, easy-to-administer licensing model.

All-Access includes industry-leading tools to design, build, and run databases and applications more efficiently. It includes renowned database tools such as DBArtisan®, Rapid SQL®, and ER/Studio®, as well as powerful application development tools, including JBuilder®, Delphi®, C++Builder®, and the InterBase® SMP database.

Supported databases, languages, and roles include:

Databases:	Oracle, IBM® DB2, Sybase®, Microsoft® SQL Server, InterBase® SMP, MySQL®
Languages & Frameworks:	C++, Java™, Delphi®, PHP, Ruby™, ANSI SQL, Procedural SQL, UML®, HTML, XML, BPMN, Data Lineage, ERD Application & Database
Roles:	Developers, Architects, and DBAs



In contrast to conventionally-licensed standalone tools, All-Access provides a single license key which unlocks an entire tool chest. Individual tools can be accessed and managed via an All-Access Client, which simplifies access and versioning of each tool within the All-Access tool chest. For network license users, there is an All-Access Server for provisioning licenses, products, and updates to All-Access Clients on a network. Finally, each All-Access license pass comes with a one-year renewable All-Access membership, providing support, updates, upgrades, new products, and access to Embarcadero's Developer Network (EDN).

A unique feature of All-Access is Embarcadero InstantOn. With InstantOn, users can simply click-and-run the select tool on-demand, either locally or over your network, without requiring a full installation on a local machine. InstantOn allows quick access to tools, even in locked-down desktop environments where installing software is problematic.

All-Access was expressly designed to ease software asset management, reduce costs, and improve budgetary predictability. A single All-Access pass covers multiple tools, platforms, and user roles, providing maximum flexibility within an organization. And with support for centralized licensing and reporting, All-Access streamlines license management and eases compliance.

For more detailed information on All-Access, please visit www.embarcadero.com/all_access.

How All-Access Reduces Software Expenses in the TCO

In comparing the TCO of the traditional software model with All-Access, one needs to understand the unique advantages inherent within All-Access that reduce the overall TCO of software tooling as follows:

Capital Expenses	
Software Licenses	All-Access reduces upfront software license costs vs. the traditional a la carte model by packaging virtually all of the tools needed by application and database developers, architects, and DBAs into a single, cost-effective "tool chest." Flexible licensing options include workstation, network-named user, and network shared licenses enable a customer to more easily cost-optimize licenses to their unique deployment requirements and usage patterns.
Software Maintenance	All-Access reduces maintenance costs in three ways: <ul style="list-style-type: none"> • Each All-Access license includes the first year of maintenance in the form of an All-Access membership. • Second, annual All-Access maintenance (membership) renewals are based on the cost-effective license model of the All-Access tool chest. This can substantially reduce annual maintenance costs vs. even a fraction of equivalent tools from multiple vendors. • Third, due to licensing flexibility and simplified license tracking and provisioning, the All-Access model makes it simpler not to "over-buy" software licenses. This reduces maintenance costs associated with unused or under-used software.
New Hardware	By covering such a wide variety of platforms within a single offering, the same application can be used with multiple platforms and thereby reduce the overall desktop footprint. Also, with All-Access' InstantOn mode of operation, client-side installs are reduced or eliminated, further economizing on client hardware insofar as the cumulative performance impact that installed applications have on the desktop.



Operating Expenses	
Tier 1-3	All-Access reduces IT and Help Desk operations support costs by providing a standardized method of installing, accessing, and provisioning a large array of software tools. Users, IT, and Help Desk staff therefore have fewer software packages and particularities to learn and support. Furthermore, by making it easier for organizations to standardize on a wide variety of software tools, All-Access enables increased user/peer support, decreasing reliance and costs associated with IT and Help Desk operations.
Desktop Management and Administration	<p>Costs associated with deploying, provisioning, re-provisioning, inventory tracking and license compliance efforts can be surprisingly high, especially for larger organizations that own many types of software licenses from many vendors. All-Access reduces these desktop management and administration costs in several ways:</p> <ul style="list-style-type: none"> • All-Access enables organizations to have network-based licenses managed by their own All-Access license server. This allows more efficient, centralized control of many software tools, reducing the time, effort, and costs associated with software deployment, usage tracking, compliance monitoring, and more. • All-Access provides many tools in an InstantOn mode, enabling users to click-and-run software with zero-install on their local machines. Together with the All-Access Client and All-Access license Server, this facilitates application provisioning in real-time, either from a local desktop, or from over the network. The net result is much quicker access to tools, particularly in locked-down desktop environments where installing software can be very arduous and time-consuming. This yields significant savings in the areas of system administration and deployment. According to Gartner Research, companies can reduce these costs by up to 60% as a result of economies gained in the testing, packaging, and support of applications².
Software Management	<p>All-Access reduces overhead costs associated with software evaluation, procurement, vendor management, and budgeting. Savings are realized in several areas:</p> <ul style="list-style-type: none"> • Software evaluation and procurement. All-Access provides instant access to virtually all the tools needed to design, build, and run databases and applications more efficiently. By providing on-demand access to a broad range of tools, All-Access reduces the time and costs associated with researching, evaluating, procuring, and deploying a wide variety of software. • Vendor consolidation. By providing virtually all the tools needed by database and application developers, architects, and DBAs, All-Access enables organizations to standardize on a single vendor for a wide variety of its software needs. Furthermore, with support for all major database platforms, programming languages, and frameworks, All-Access can reduce the number of software vendors required to meet tooling needs for heterogeneous platform and development environments. • Budgeting. As a single All-Access license supports a wide variety of tasks for varied IT roles and platforms, it reduces overhead costs associated with tools planning and budgeting, as well as for license allocation and re-allocation as needs evolve.
User and IT Training	All-Access provides a standardized means of licensing, deploying, and accessing a wide variety of software tools. By providing a standard software tool set that is easier to deploy and manage across multiple machines, platforms, and roles, All-Access helps organizations reduce basic user and IT training costs.
User Expenses	
End-user Training	All-Access reduces end-user training costs in at least two ways. First, it provides users with tools that can support all major database platforms and programming languages. This minimizes training costs for different tools, often from different vendors, to support multiple environments. Additionally, All-Access members gain access to a variety of self-service training materials, and to the Embarcadero online community, helping to reduce costs associated with end-user training.
Fixing	All-Access can reduce the fixing costs associated with building and supporting custom applications by providing teams with all the tools they need to design, build, and run these custom applications more efficiently. At the same time, with InstantOn, applications used as part of All-Access are much less prone to conflicts or other issues with other desktop applications, further reducing a company's need to invest in desktop maintenance and intervention.
Downtime	All-Access reduces the time and costs associated with researching, evaluating, and gaining access to critical software tools by providing users with instant access to virtually all of the tools they need to design, build, and run their databases and applications more efficiently. This not only reduces downtime costs, but maximizes staff productivity by providing access to high-value they not otherwise have known about or accessed. System downtime, as opposed to staff downtime, is also positively impacted as a result of the greatly-improved optics into one's systems and the ability of the tools to rapidly remedy any problems.



Building a TCO Model

The framework for this model is based on a study from Gartner Inc. conducted in 2008, entitled “TCO of Traditional Software Distribution vs. Application Virtualization”. This study compares the cost of traditional software ownership to the cost of application-virtualized software, which is the technique used by Embarcadero to provide the InstantOn feature. The specific cost categories were taken as is, but condensed (from 22 to 15) by grouping related areas and by omitting categories with a zero cost factor. Also, because this paper focuses on application & database tools specifically (the Gartner model includes all software types), the absolute figures in the model must necessarily differ. The Gartner model denotes a certain relationship between the various costs, and these relationships were preserved. In the report, Gartner models three types of organizational modes of operation: unmanaged, moderately managed, and locked & well managed. Here we used the “moderately managed” model as the basis.

To arrive at the baseline cost of standalone software, against which All-Access was compared, we first assumed that the cost of All-Access is roughly 2.5 times the first-year direct software cost (license + maintenance) of a single software product; and that over the course of three years, a typical individual (or role on a project) would ultimately touch and require licenses for approximately four products. The need for multiple products arises due to three reasons:

1. The need to conduct duties within the scope of one’s current role, that cannot be met with just one tool (some examples are: database change management and database performance tuning; or data modeling and database development; or SQL debugging and Java debugging, which each commonly require a specialized tool set),
2. The need to introduce a new tool in conjunction with a new platform that is being introduced, and
3. Over time, change to one’s role, change of projects, change to a new project lifecycle phase, and changes of technology and organization, are all factors that can drive the need for new tools.

The final element taken from the Gartner model is the estimated cost savings for application virtualized software (InstantOn): one of the key benefit areas in the “On Demand” category, outlined above.

This model is meant to serve as an example and guideline for organizations to compare both the impact of hard and soft costs in building their own such model.

All-Access Versus the Traditional Software Model

Cost Analysis	Year 1		Year 2		Year 3		Total Cost – Years 1-3	
	Software	All-Access	Software	All-Access	Software	All-Access	Software	All-Access
Capital Expenses								
New Software	\$612	\$438	\$0	\$0	\$175	\$0	\$787	\$438
Software Maintenance	\$131	\$0	\$131	\$144	\$131	\$144	\$393	\$288
Hardware	\$336	\$336	\$0	\$0	\$0	\$0	\$336	\$336
Hardware Maintenance	\$50	\$50	\$50	\$50	\$50	\$50	\$150	\$150
IT Software	\$89	\$89	\$89	\$89	\$89	\$89	\$267	\$267
Operating Expenses								
Tier 1-3	\$401	\$148	\$401	\$148	\$401	\$148	\$1,203	\$444
Security	\$91	\$91	\$91	\$91	\$91	\$91	\$273	\$273
Desktop Management	\$217	\$120	\$217	\$120	\$217	\$120	\$651	\$360
Administration	\$78	\$23	\$78	\$23	\$78	\$23	\$234	\$69
Management	\$77	\$22	\$77	\$22	\$77	\$22	\$231	\$66
User and IT Training	\$53	\$32	\$53	\$32	\$53	\$32	\$159	\$96
Disposal	\$34	\$22	\$34	\$22	\$34	\$22	\$102	\$66
End-User Expenses								
End-user Training	\$478	\$263	\$478	\$263	\$478	\$263	\$1,434	\$789
Fixing	\$2,320	\$1,151	\$2,320	\$1,151	\$2,320	\$1,151	\$6,960	\$3,453
Downtime	\$125	\$97	\$125	\$97	\$125	\$97	\$375	\$291
Total	\$5,092	\$2,882	\$4,144	\$2,252	\$4,319	\$2,252	\$13,555	\$7,386
Cumulative Total	\$5,092	\$2,2882	\$9,236	\$5,134	\$13,555	\$7,386		



All-Access Cost Savings Breakdown

All-Access gives large enterprises up to an immediate 43% reduction in upfront cost with a 46% reduction in overall TCO sustained over 3 years.

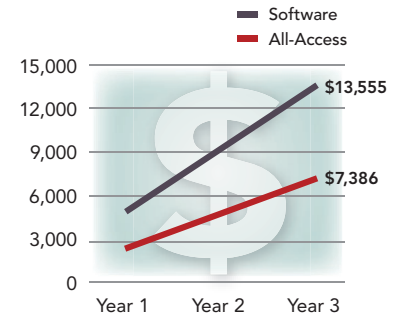
- 23% savings resulting from the various benefits of the tool chest & membership model, including tool and vendor consolidation (which can yield significant administrative and operational savings, as well as legal and accounting), the productivity gain resulting from having tools on hand when they are needed (little to no lag time), and the increased leverage that can be achieved from a tool chest across roles and project lifecycle phases. The benefits here include both hard and soft costs.
- 9% savings resulting from centralized license management, and a reduction in the time necessary to conduct compliance related activities, together with increased utilization of software assets that results from being able to track and reallocate licenses with greater ease.
- 6% savings from the multi-platform capability inherent in the tools available through All-Access, which can reduce the number of software applications required to manage multiple platforms, and with this, reduce the training requirement, as well as the hardware requirement (insofar as one application such as DBArtisan would replace several database-specific applications that otherwise might all need to be open at one time).
- 8% savings can be attributed to on-demand technology & InstantOn, and the resulting simplification of software rollouts, together with the runtime isolation inherent in application-virtualized software, which tends to reduce conflicts between desktop applications, and associated troubleshooting and downtime.

Note: The 8% incremental TCO gain resulting from InstantOn compares with a 6% figure used by Gartner. There are two reasons for the difference: one is that the Gartner study assumes that only 80% of applications can be virtualized. The second is that All-Access InstantOn also includes a delivery infrastructure (through the All-Access Client and optional All-Access Server component), creating additional incremental value beyond InstantOn. Clearly the savings will differ from organization to organization, in accordance with its size and numerous other variables, including methodology, governance and organizational structure.

Assumptions

The model estimates the TCO of software tooling for 50 users. Actual figures for software and maintenance spend, together with the benefits estimates outside of InstantOn, are based on Embarcadero's years of experience, with reference to previous ROI studies done for Embarcadero's standalone products, which are available upon request. The benefits accruing to the InstantOn feature, and the categories and relative breakdown of spend were sourced primarily from the Gartner study.

All-Access reduces upfront capital expenses by 43% and reduces the TCO for software tools by 46% over three years





Conclusion

Embarcadero All-Access is a powerful solution that not only transforms the way organization buy tools, but also can easily reduce upfront costs by up to 43% and three-year TCO by 46%. It is designed so that companies can focus on your business objectives, rather than having to worry about continually adjusting and optimizing their toolset to match point-in-time needs which continually fluctuate due to changes in projects, technologies, and corporate priorities. All-Access provides a set of leading diagnostic and productivity tools that are automatically kept current, allowing organizations not only to reap the many benefits of keeping pace with the latest technology, but to save the time and money that would otherwise go towards keeping up with the latest technology.

Three key considerations in creating All-Access were the need to provide flexibility, transparency, and ease of management. While it is obvious that these are all necessary and of great benefit, administrative benefits can sometimes be overlooked and can often times be difficult to quantify. The model presented here is intended to show that these factors play an important role in determining the overall cost that an organization pays for software, and show how they can go about quantification.

The model shown here, and the factors that play into this model, show that adopting an All-Access solution can significantly reduce an organizations total cost of ownership for application development and database tooling. The information relayed here is intended to help the reader better evaluate his or her larger cost structure, and more easily compare the overall costs of the traditional software model (which generally involves a portfolio of discrete tools from a variety of vendors); and the benefits that might be achieved by adopting a single-vendor tool set that is centrally managed, on demand, and multi-platform and multi-role.

To learn more about Embarcadero All-Access and download a free trial to experience the power of on-demand tooling first hand, visit www.embarcadero.com/products/all_access.

About Embarcadero Technologies

Embarcadero Technologies, Inc. is a leading provider of award-winning tools for application developers and database professionals so they can design systems right, build them faster and run them better, regardless of their platform or programming language. Ninety of the Fortune 100 and an active community of more than three million users worldwide rely on Embarcadero products to increase productivity, reduce costs, simplify change management and compliance and accelerate innovation. The company's flagship tools include: Embarcadero® Change Manager™, RAD Studio, DBArtisan®, Delphi®, ER/Studio®, JBuilder® and Rapid SQL®. Founded in 1993, Embarcadero is headquartered in San Francisco, with offices located around the world. Embarcadero is online at www.embarcadero.com.

¹ Timothy Chou, "The End of Software", page 7.

² "Virtualized applications can reduce the costs of testing, packaging, and supporting an application by 60%." IBID.

³ This is a mid-to-high end example. All-Access prices start at \$2,250 for the first year for an entry-level Bronze membership, with an annual membership renewal of \$1,125

Download a Free Trial at www.embarcadero.com

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