



**What is Boardwalk?**

Boardwalk is an enterprise spreadsheet data management solution which leverages a patented database application designed specifically to manage the data and business logic contained in Excel workbooks used to drive critical business processes across the enterprise. Rather than working at a file level, Boardwalk enables multi-user collaboration, automatic consolidation, secure access control, an audit trail for all changes, and multi-point integration with the rest of the extended enterprise—all at the cell level.

Boardwalk eliminates the many inefficiencies associated with spreadsheet-based processes such as emailing files for collaboration, check-in/out for access control, cut & paste for data consolidation, and manually comparing multiple files for change tracking and version management.

**What makes Boardwalk unique?**

Spreadsheets let business users define a business process using rows and columns to show the relationship between the data, formulas to drive the business logic, and pick-lists, lookups, and other common Excel features to facilitate the user experience. Sales forecasts, inventory reports, budget plans—they all can be developed with ease in Excel, but they are not easily shared, scaled, or secured because spreadsheets are not a database which makes it difficult to get to the data within them. Boardwalk enables next-generation spreadsheet data management through a patented technology which enables managing spreadsheet data *at the cell level*.

	A	B	C	D	E	F	G	H	I	J	K
1	FIN 48 Interest Accruals All Positions										
2	Calculate Through: 2013										
3											
4					Beginning Balance		Interest Accrual				Fiscal Year
5	Position	Jurisdiction	Date	UTP Tax Amount	Accrued Interest	Beginning Balance	Q1	Q2	Q3	Q4	Total Interest
6	1	Federal	03/15/02	\$722,351	\$545,819	\$1,268,170	\$9,415	\$9,591	\$9,770	\$9,844	\$38,620
7	2	NJCORP	03/15/02	\$509,317	\$651,539	\$1,160,856	\$17,890	\$18,089	\$18,287	\$18,287	\$72,554
8	3	Canada	03/15/03	\$450,394	\$406,548	\$856,942	\$10,630	\$10,882	\$11,140	\$13,555	\$46,207
9	4	AZ	03/15/05	\$242,009	\$119,408	\$361,417	\$2,674	\$2,703	\$2,733	\$2,733	\$10,843
10	5	MA	03/15/06	\$601,129	\$310,329	\$911,458	\$9,034	\$9,225	\$9,420	\$9,516	\$37,195
11	6	Federal	03/15/07	\$1,007,251	\$313,814	\$1,321,065	\$9,808	\$9,991	\$10,177	\$10,254	\$40,231
12	7	AR	03/15/07	\$582,447	\$337,660	\$920,107	\$14,362	\$14,521	\$14,681	\$14,681	\$58,245
13	8	Federal	03/15/09	\$899,928	\$132,481	\$1,032,409	\$7,665	\$7,808	\$7,953	\$8,014	\$31,440
14	9	MA	03/15/10	\$775,483	\$103,139	\$878,623	\$8,708	\$8,893	\$9,081	\$9,173	\$35,855
15	10	KY	03/15/10	\$541,009	\$81,077	\$622,086	\$8,004	\$8,093	\$8,182	\$8,182	\$32,461
16	11	NYCORP	03/15/11	\$720,032	\$105,958	\$825,990	\$15,416	\$15,880	\$16,359	\$16,671	\$64,325
17	12	CACORP	03/15/11	\$793,846	\$50,623	\$844,469	\$6,270	\$6,387	\$6,506	\$6,555	\$25,717
18	<b>Totals</b>				<b>\$3,158,396</b>	<b>\$11,003,593</b>	<b>\$119,875</b>	<b>\$122,062</b>	<b>\$124,289</b>	<b>\$127,465</b>	<b>\$493,691</b>

Using a Boardwalk enabled spreadsheet, business users continue to work as they do today, but the data and formulas in the spreadsheets are centrally managed, secured, and auditable through the Boardwalk Server. Our web-based technology automates and “enterprise enables” multi-user spreadsheet based processes providing a new level of data management since all of the data in the spreadsheet files is now accessible from the Boardwalk Server.

**How does Boardwalk work?**

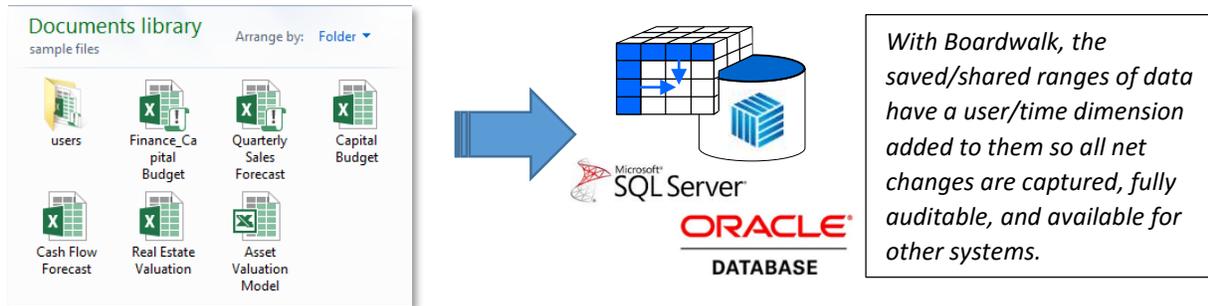
Boardwalk has a web server component which runs in the cloud or on premise and a desktop component which is a Boardwalk Excel template used to communicate between the user working on the desktop and the Boardwalk server. The Boardwalk Excel template has Boardwalk macros in it which are used to communicate with the server, so there is no installation of software required on the desktop. The Boardwalk server software runs on top of SQL Server or Oracle and communicates with the Boardwalk template through a Submit/Refresh action over HTTP/HTTPS. The Boardwalk Server versions every cell change and manages the exchange of updated cells between the clients and the server. To get started, process owners can use the Boardwalk Design Framework authoring toolkit (also in Excel) to automate



processes in sales, finance, operations, supply chain, human resources, IT, and or any other organization in a matter of weeks.

## Spreadsheet Process Automation with Boardwalk

Boardwalk centralizes spreadsheet data in a single, centrally managed version of the truth and provides powerful process automation capabilities including entitlement/access controls, integration with other enterprise systems, and a rich audit trail for tracking who changed what and when all the way down to the cell level. Automating a process with Boardwalk immediately boosts efficiency and improves security.



Key features include:

- Collaboration - Using Boardwalk, users work off-line in their workbooks until they are ready to share changes. Updates are automatically shared between all users by simply doing a “Submit” and “Refresh” and all changes are tracked with a complete audit trail.
- Access Control – The data is sliced on the server so that users only work with the data they are permitted to access. This not only manages file sizes, but enhances the level of security available for the data, and eliminates the manual carving-up and re-consolidation of the spreadsheets.
- Versioning, Audit, and Compliance – All changes are captured and versioned, and upon refresh, users see the latest updates made to the cells by others in the process. An additional click will show all the changes to a cell back through time – who made the change and when.
- Integration – Boardwalk’s Integration Framework supports two-way integration between Boardwalk’s database and other enterprise systems and data sources including RPA.
- Email Notification and Workflow – set up email notification and workflow to further automate the spreadsheet process using the Boardwalk tools.
- Process Automation – Boardwalk Command Language (BCL) is a parameterized scripting language used to automate process which can be centrally controlled and monitored for completion, exceptions, and usage across a large number of process, reports, and other Excel work.
- Application/Platform Independent – view and edit tabular data within Excel, Google Docs, Office 365, and other applications and on Windows, MAC, IOS, and Android platforms.

Typical benefits realized using Boardwalk include providing more time for employees to do planning & analysis, increased process cadence, improved data visibility, more timely decisions, better security with access control, improved data quality through validations and an audit trail, and overall better business performance across inventories, revenue, and margins while at the same time reducing risk.



**An Example – Budget Adjustment Planning**

Many companies find it hard to track budget adjustments that fall out of the traditional quarterly business cycle often only finding variances when actuals are captured for the most recent period. Using Boardwalk, a large business was able to track budget adjustments across all its business units and departments on a monthly basis. Using a planning template with multiple functional tabs, account measure data which is calculated in Excel while making changes, and integrations to the latest actual data, finance and LOB staff are able to input adjustments to the current business forecast using the approved categories which align with the transactional data. All users are able to work in Excel, but only see the data related to their responsibility through access control. All changes are automatically consolidated with change comments making it easy to see who has changed what and why. Using Boardwalk, they were able to get in front of requested budget adjustments and take appropriate approval or rejection action depending the adjustment’s impact on the business.

**Understanding what’s changed**

Central to the Boardwalk technology is the versioning of cell-level changes when a user (or external system through integration) submits a change. Only the cells that have changed are exchanged between desktops and the server and everything is auditable. Not only can you see all the details regarding who and when, but also the what, why, plus you can even recreate the spreadsheet data as of any change.

In the Boardwalk Server, all updates done by users (or systems) are inserts (there are no updates) and a new version of the changed cells is created and given an immutable transaction ID. This means, just like any other database, the information associated with a given change is uniquely accessible both from within Boardwalk and also from other systems.

**Workbook & Cell-Level Audit Trail Reports**

The Boardwalk Server provides cell-level audit trail data in Excel or an external reporting/auditing environment. Users can select any cell and generate a complete audit trail of all changes to that cell over any period of time.



List of Updates on selected cell  
from September 14, 2015 12:00:00 AM to October 14, 2015 12:00:00 AM November 14, 2015 02:31:37 PM

Updated Value	Formula	Formula Updated	Updated By	Updated On	Comment
\$ 145,200			john@acme.com	09/17/2015 09:10 AM	this weeks changes
\$ 155,000			john@acme.com	10/08/2015 04:21 PM	adjustments for upside
\$ 145,202			mgr@acme.com	10/19/2015 08:37 AM	upside not clear
\$ 150,000	+RC[-1]*1.1	Y	john@acme.com	11/10/2015 11:10 PM	tied to last quarter sales

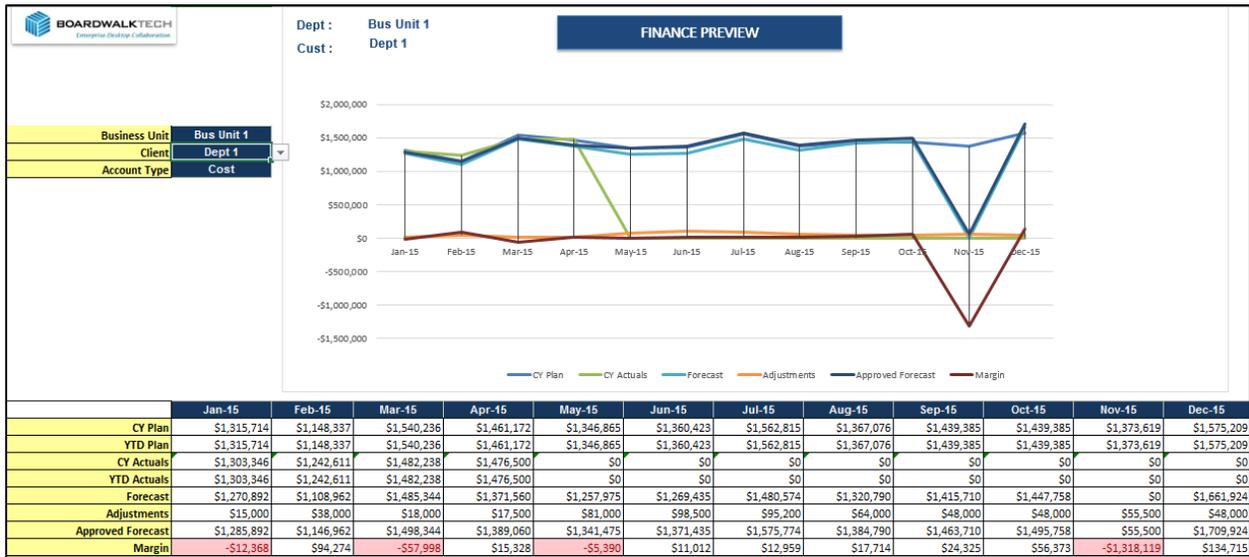
They can also select an update done to any spreadsheet and re-create the spreadsheet as of that time with change comments showing old/current value and who changed it. There’s even an option to include formulas (and related changes) so the business logic as of this update is available for inspection.

List of Updates on table Capital Budget  
from May 20, 2015 12:00:00 AM to May 27, 2015 12:00:00 AM May 27, 2015 03:29:32 PM

Include Formulae

	Updated By	Updated On	Comment	Rows Added	Rows Deleted	Columns Added	Cells Updated	Formulae Changed	Baseline Created
<input type="checkbox"/> 4054	jb.kuppe@boardwalktech.com	05/27/2015 10:02 AM	Link export new table	Y		Y	Y		
<input type="checkbox"/> 4906	info@boardwalktech.com	05/27/2015 10:04 AM	my inputs				Y		
<input type="checkbox"/> 4917	jb.kuppe@boardwalktech.com	05/27/2015 02:57 PM	cost adjustments				Y	Y	

Beyond an audit trail of changes, Boardwalk also supports powerful comparative reports which are also available either within Excel or in any external BI/analytics environment.



**Boardwalk It!**

There’s simply no other solution on the marketplace today which provides capabilities for cell-level data management. Only Boardwalk offers a complete set of tools for managing the data from existing spreadsheets without re-platforming the process to a different data environment. Coupled with Boardwalk’s integration framework for pulling and pushing data with other enterprise system, only Boardwalk provides a comprehensive solution to the Excel chaos found in enterprises today.