The Need for Digital

We are in a time of unprecedented change and mass company extinctions. Between 2000 and 2015, 52% of the Fortune 500 have either gone out business, were acquired or ceased to exist. *Digital transformation* is a pressing conversation in C-suites globally – and the journey to 100% digital has become an imperative. Nowhere are the risks more acute than those associated with high-touch, manual, uncontrolled processes that can damage a brand or reputation, or cause financial restatements impacting shareholder value.
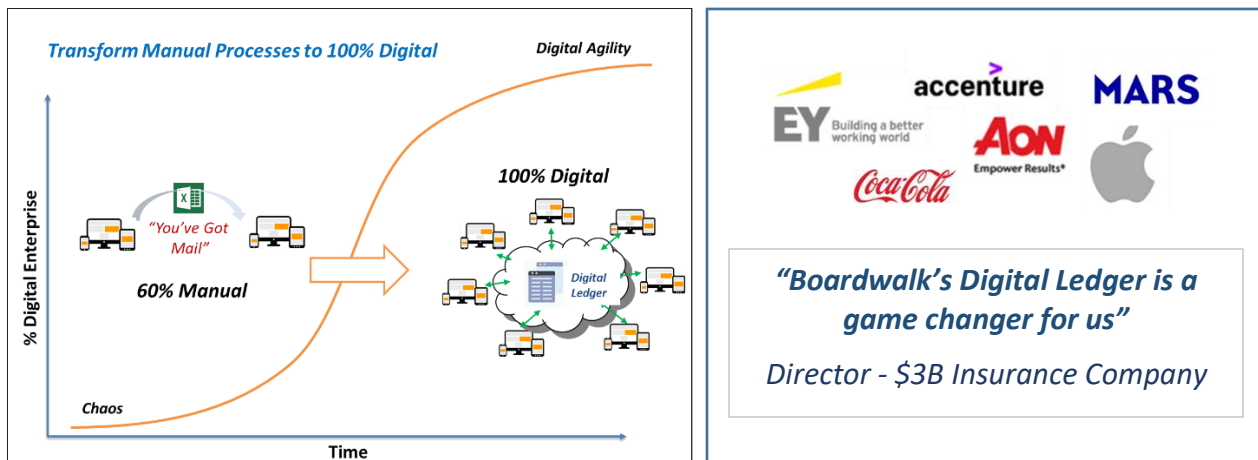
A key area of focus for digital transformation is the prolific use of Excel which continues to be the number one business application in the world because of its utility and flexibility compared with traditional software tools.   Sales forecasts, inventory reports, budget plans—they all can be developed with ease in Excel, but they are not easily shared, scaled, secured, or trusted and verifiable because Excel is a file-based technology and not database driven. The Boardwalk Digital Ledger solves this problem.

The Boardwalk Digital Ledger

The Boardwalk Digital Ledger Platform (Boardwalk) – is a flexible, no code, application environment for transforming manual processes to digital in all areas in the enterprise using existing Excel processes as the starting point or creating completely new applications from scratch.

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

The centerpiece of Boardwalk's innovation is a digital ledger – a patented data store that captures and versions all changes over time at the cell or attribute level. Using a digital ledger, Boardwalk connects and unifies the manual processes taking them to 100% digital.

What makes Boardwalk unique?

Using Boardwalk's no-code, plug and play framework, the Boardwalktech professional services team or client-trained business analysts can rapidly Boardwalk-enable any legacy Excel process and stand up an application in weeks, rather than months.
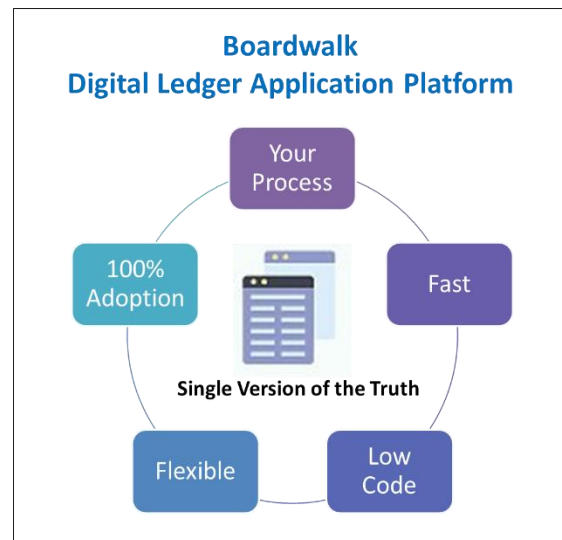
Once configured on the ledger, the spreadsheet model is digitally transformed to a data managed environment with enterprise class features and security, running as a cloud application.   Then other UIs can be set up to interact with that data – web browser or mobile based – to augment the Excel UI access.

With Boardwalk, you can stand up applications in 6 weeks that enable multi-user collaboration, automatic consolidation, secure access control, blockchain-level immutability and verification, an audit trail for all changes, and multi-point integration with the rest of the extended enterprise—all at the cell level.

Benefits Realized:

- Compelling ROI - broad applicability
- Eliminated millions in customization costs
- Reduced business cycle times up to 75%
- Reduced $ millions in SLA penalties
- Recovered 15-20% of manual work
- Reduced compliance risk
- Increased revenues and improved margins
- Applications delivered in 6-8 weeks

Key Features and Capabilities of a Boardwalk Digital Ledger Application

- Security - Data and formula are centrally managed, secured, auditable, and verifiable.

- Collaboration - Users work in their chosen UI 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 for Data Size and Security– The data is sliced on the server, so users only work with the data they are permitted to access or that they want to work with in large data sets. 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 data.

- 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 shows all the changes to a cell back through time – who made the change and when with a time stamp.

- Integration – Boardwalk's Integration Framework supports two-way integration between Boardwalk's Digital Ledger database and other enterprise systems and data sources.

- Email Notification and Workflow – set up email notification and workflow to further automate the process using the Boardwalk platform.

- Blockchain level immutability and verification – Boardwalk supports multi-part communication and collaboration as part of a workflow, where participants have the flexibility to commit all or selected data decisions to an immutable blockchain ledger where the provenance of all transactions (decisions) can be verified.

- Application/Platform Independent – view and edit tabular data within Excel, an Internet browser, or mobile device.

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. Without complete visibility and alignment across multiple parties within the critical inter-quarterly (0-12 week) cycle, users add buffers to their planning data costing the business revenue and margin. Using Boardwalk, a large business was able to track budget adjustments across all its business units on a continuous 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 while also eliminating costly planning buffers.

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 Boardwalk Digital Ledger and everything is auditable. Not only can you see all the details regarding who and when, but also the what, why, and what the data was as of any change or point in time.

In the Boardwalk Ledger, 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 enables the information associated with a given change to be uniquely accessible both from within Boardwalk and also from other systems.

<u>Workbook & Cell-Level Audit Trail Reports</u>

The Boardwalk Ledger provides cell-level audit trail data. Users can select any cell and generate a complete audit trail of all changes to that cell over any period of time.

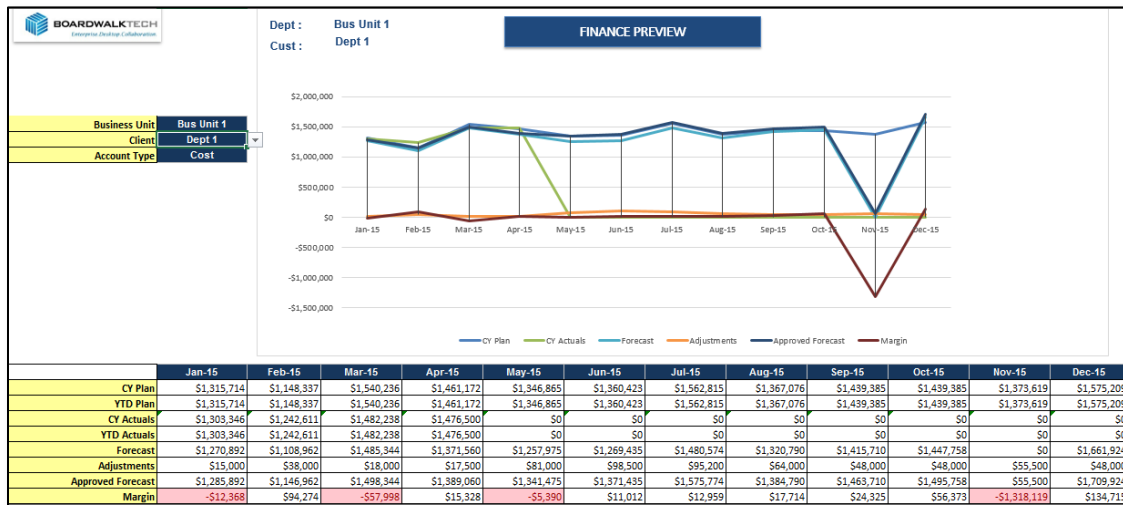|		Formula			
List of Updates on selected cell					
from September 14, 2015 12:00:00 AM to October 14, 2015 12:00:00 AM					November 14, 2015 02:31:37 PM
Updated Value	**Formula**	**Formula Updated**	**Updated By**	**Updated On**	**Comment**
$ 145,200			john@acme.com	09/17/2015 09:10 AM	this weeks changes
$ 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 data element and re-create the data 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.

	Updated By	Updated On	Comment	Rows Added	Rows Deleted	Columns Added	Cells Updated	Formulae Changed	Baseline Created
	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	
	Show Table at Selected Time		Compare Two Updates			Uncheck All		Include Formulae	
4894	jb.kuppe@boardwalktech.com	05/27/2015 10:02 AM	Link export new table	Y		Y	Y		
4906	info@boardwalktech.com	05/27/2015 10:04 AM	my inputs				Y		
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.

	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15
CY Plan	$1,315,714	$1,148,337	$1,540,236	$1,461,172	$1,346,865	$1,360,423	$1,562,815	$1,367,076	$1,439,385	$1,439,385	$1,373,619	$1,575,209
YTD Plan	$1,315,714	$1,148,337	$1,540,236	$1,461,172	$1,346,865	$1,360,423	$1,562,815	$1,367,076	$1,439,385	$1,439,385	$1,373,619	$1,575,209
CY Actuals	$1,303,346	$1,242,611	$1,482,238	$1,476,500	$0	$0	$0	$0	$0	$0	$0	$0
YTD Actuals	$1,303,346	$1,242,611	$1,482,238	$1,476,500	$0	$0	$0	$0	$0	$0	$0	$0
Forecast	$1,270,892	$1,108,962	$1,485,344	$1,371,560	$1,257,975	$1,269,435	$1,480,574	$1,320,790	$1,415,710	$1,447,758	$0	$1,661,924
Adjustments	$15,000	$38,000	$18,000	$17,500	$81,000	$98,500	$95,200	$64,000	$48,000	$48,000	$55,500	$48,000
Approved Forecast	$1,285,892	$1,146,962	$1,498,344	$1,389,060	$1,341,475	$1,371,435	$1,575,774	$1,384,790	$1,463,710	$1,495,758	$55,500	$1,709,924
Margin	-$12,368	$94,274	-$57,998	$15,328	-$5,390	$11,012	$12,959	$17,714	$24,325	$56,373	-$1,318,119	$134,715

Delivering on 100% Digital

Boardwalk offers a complete set of tools for transforming legacy spreadsheet and email processes to digital without re-platforming. There's simply no other solution in the market today which provides cell-level data management and security at the level of Boardwalk.