

Designing **Workflows & Forms**

How to Avoid a Change Management Backfire

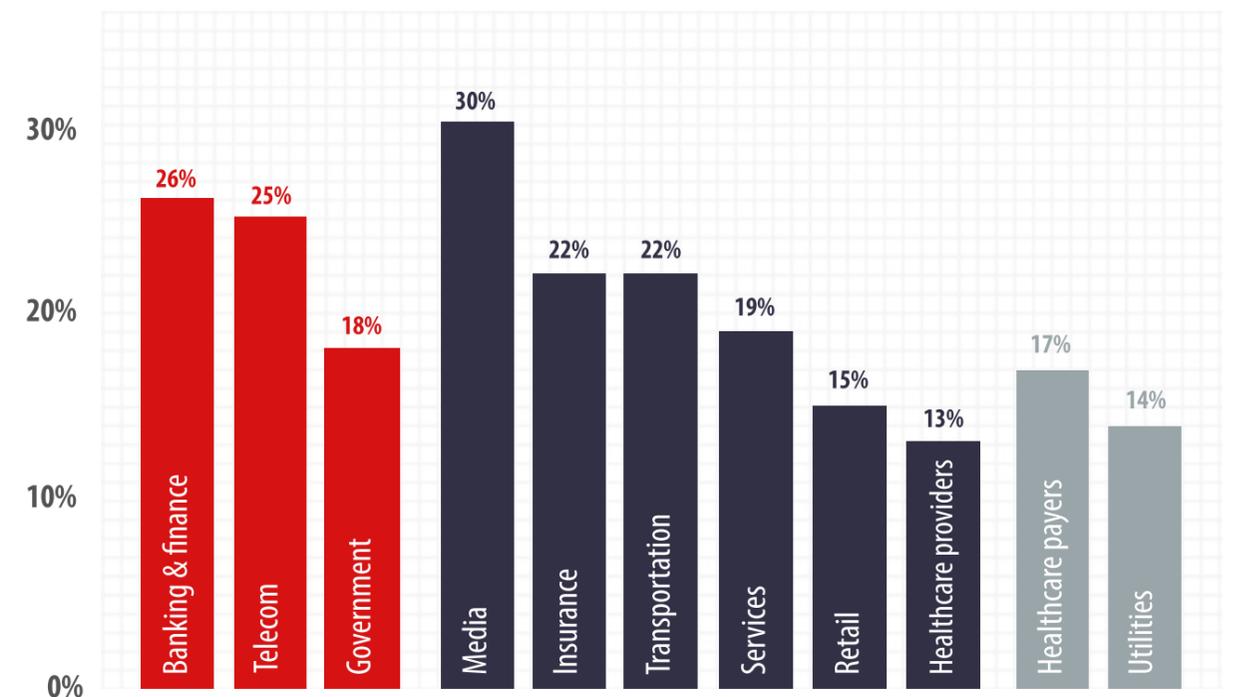
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00 Introduction

Digitalization is the absolute priority for forward thinking enterprises these days, but to truly understand it, one needs to realize how much the business environment has changed in recent years, and why certain aspects of it are being emphasized more than before.

One of the buzzwords behind the trend towards digitalization is the digital transformation, to which major studies point to as the key priorities on the rise for CIO's. Gartner's [CIO Agenda 2017](#) revealed that the topic of digital business/digital transformation is a top 3 priority for 11 out of 15 researched industries. The industries where digitalization was found to be top priority are (see right):



Source: Gartner CIO Agenda 2017

Digitalization is a broad term, encompassing so much more than just the move from analog to digital. As new technologies expand further into all areas of modern life, both as hardware and software, innovation takes the form of not just single groundbreaking shifts, but also small-step adjustments and optimizations. New technologies bring new business opportunities, reflected by new business models. Gartner's 2018 CIO Survey confirms this, stating that "digitalization continues to advance, with enterprises seeking growth from digital business models".

However, even the best ideas and best business models are doomed to fail without ability to execute them. As a matter of fact, experts estimate that only 10% of enterprises successfully execute their strategies. For the rest, this shortcomings are often the CIO's problem to solve. So, how can organizations avoid change management backfire and successfully implement their digitalization goals?

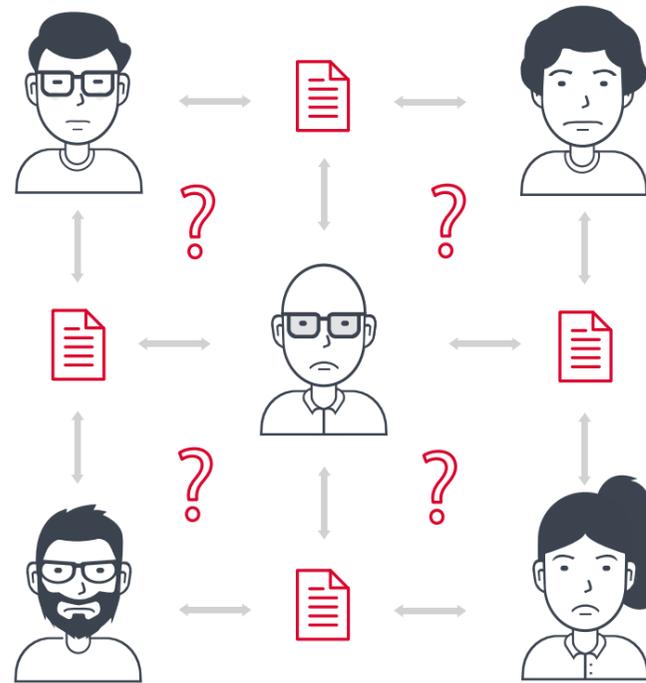
01 **How to avoid** change management backfire

The benefits of business applications

When it comes to delivering easily changeable applications, workflow-based systems are proved to be the optimal solution. They enable creating business applications that answer current business needs and at the same time leaving plenty of space to introduce new procedures and continuous improvements.

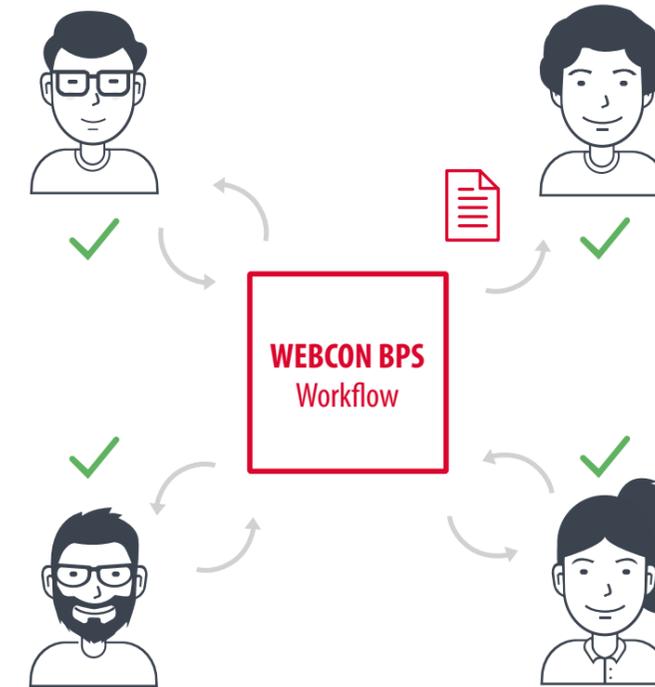
Workflow-based applications offer:

- work automation at the personal level,
- the ability to leverage data accumulated across company systems and files,
- process automation, with simultaneous transparency, for analytical purposes and continuous optimization.



Before
Manual Method

Manual routing can be confusing and time-consuming



After
WEBCON BPS Workflow

The workflow streamlines and simplifies

This approach, visualized above with WEBCON BPS, is so effective that in many cases the business comes back wanting more from IT. As the digital transformation progresses, the demand for workflow-based solutions increases.

Delivery of applications that help users on daily basis and at the same time keep up with changes significantly increases confidence in IT as a department that not only solves problems but also simply helps. To the extent, where business requests more and more business applications to be delivered, therefore making IT a true partner in business.

The flywheel: change management

Those who use SharePoint are familiar with the workflow engine and easily-adjusted three-step approval procedure. However, soon after going live, it may turn out that the tool might need a few more sophisticated additions to meet business requirements. This is how a simple acceptance workflow transforms into a workflow-based business application. Furthermore, its proven usefulness to business soon triggers the creation of an entire ecosystem made up of dozens of different applications, supporting various business processes. This perspective for future development needs to be taken into consideration as early as at the first application's design stage.

When thinking about the structure of a business application, one needs to take into account not only the analysis, delivery and launch stages, but also bear in mind the utmost importance of change management, which becomes not a single task, but an ongoing practice. WEBCON's experience proves that the changes introduced to workflow-based applications at the request of business most often relate to:

- changing responsibility (task assignment),
- changing branch conditions,
- adding or removing approval steps,
- triggering actions (activities) and changing their configuration.

In fact, for systems of innovation, change management is the only way to deliver a business application under unpredictable or even volatile requirements, and for systems of differentiation, the only way to maintain a competitive edge. But is there a well-proven pattern to designing workflows in such a way to make them change-ready, or even change-friendly? How can you avoid a change management backfire?

02 Workflows

WORKFLOWS

Avoid the pitfalls of managing long-term instances

Since all .NET-based workflow engines operate on the same basis, i.e. a workflow definition is embedded in the workflow instance, a new version of a workflow definition is created for every introduced change. As a result, legacy instances have to end the old way, while new instances follow the new one. As a result, a new version of the process is created each time a change is introduced.

There are of course processes in which the above mentioned course of action is no problem at all, but what about long-term processes that are subject to numerous amendments along the way? What about procurements, tenders and agreements, or offer approvals, claims, and loan/leasing applications, not to mention your core business processes? Eventually, you're stuck with several versions of the same workflow running at once, which is an added burden to the IT department that has to maintain them, and to end-users, who have to work with the status quo. It's like being stuck in a traffic jam with no possibility to reroute to a parallel route that is moving smoothly. You can only stay where you are and tough it out, or go back to square one and plan your trip once again, this time more prudently.

Step-by-step through the minefield

One way the currently available .NET-based workflows handle more complex business scenarios is by splitting multi-stage acceptance workflows into a series of smaller, simpler processes. The short lifetime of smaller workflows minimizes costs, and it is easier to restart a smaller piece, instead of the entire process. Numerous versions of the same workflow are still there, but they run for a shorter period of time, and it is easier to react to changing business requirements.

However, putting these kinds of smaller workflows together requires additional effort on the part of the IT department. It also requires tracking the overall process progress for a given business instance, and reporting on its history of actions and approvals. What's more, in the case of cloud licensing comes a surprising twist: when fees are workflow instance-, or workflow-definition based, running a number of instances of the same process increases its overall cost dramatically.

So, what alternatives do we have then? Can introduced changes to workflows be effective immediately? Modern business process management solutions like WEBCON BPS are the answer. In WEBCON BPS, changes are applied as soon as they are saved, with no deployments, restarts or migrations. Really.

03 Forms

Stress-free Form Customization

It isn't news that every form is actually a process in and of itself, as it requires filling in, validation and saving. The typical paper document filled with all-in-one, all-purpose information can easily become a trap simply by transferring it from an analog to digital format.

What a properly set up digital form does is neatly separate people, tasks and data, triggering only the necessary actions and calling for relevant data. The end result is a user who is presented with a personalized, confusion-free form. But is this accomplished by creating a number of independent forms, or can it be executed by harnessing the power of form conditions to create a "live" form?

One form to rule' em all?

The approach to designing a form is driven by the most common changes introduced. By using smart forms, you can:

- change the visibility of fields and sections,
- change required and fillable information,
- change the behavior of fields and their validations,
- add new forms to newly created steps of the workflow, or
- personalize field defaults and add conditional (dynamic) behavior.

Unfortunately, there is no rule favoring the use of a single form for all business conditions. The decision whether to create a single form with a set of conditions, or a number of forms pertinent to specific steps of the workflow must be made based on business needs and conditions.

When a form requires additional, complex programming, the former scenario is almost always a bad idea as amending the form will automatically mean muddling through lines of code. Here, creating a few simpler forms and linking them to relevant steps is more practical. However, when a form is similar throughout the entire process, setting appropriate conditions to it saves loads of work.

04 Standardization & Re-Usability

Recognize instantly, replicate easily and reap the benefits

IT departments are no longer building single business applications, but entire digital ecosystems that need to work together seamlessly. The IT department takes the form of a factory or production line leveraging economies of scale, where it is important to optimize the production process in such a way that you can deliver as many “products” as possible at the lowest cost.

One good way to achieve efficiency is to use prefabricated elements, and use a common platform to create different “models”. The benefits of standardization in building business applications include, among others, increased user adoption. If an IT department is to deliver dozens of applications over the next few years, an overall approach to their construction, usage and implementation needs to be created, and benchmarks regarding the tools need to be delivered.

Standards to take you the extra mile

A standardized look & feel, layout & behavior, navigation and notifications all positively influence a business application's adoption rate. Standardization is also vital when it comes to maintenance, limiting the time IT spends on these tasks and putting their focus on more pressing concerns. With coded business rules, conditions and computations, a certain level of standardization is also recommended.

Low-code platforms are solutions that deliver all the above and more. With both the front- and back-end of the application standardized, IT departments don't need to re-invent the wheel with every single tool they build or change they implement. The platform itself maintains the standard for them.

At the application/process/workflow level, the benefits of a standardization-oriented mindset include easier change management and reduced time-to-business for change requests. Standardization of the environment also reduces requirements at the analysis phase, eliminates repeated training sessions, provides consistency of the end user interface, shortens the UAT phase, improves user-adoption, prevents irreplaceability and minimizes overall stress for all involved.

Acceptance path

SharePoint Luke Skywalker

Start BPS1 BPS2 DEMO ESPC2016 WEBCON BPS BPS4 POC

PR/2017/0015

Process: Purchase Request
Form type: Purchase Request
Workflow: Approval

Steps: Registration, Manager approval, Approved

Details: Created by: Luke Skywalker, Created date: 4/11/2017, Modified by: Luke Skywalker, Modified: 4/12/2017, Version: 5, Assigned to: Matt Manager, Process supervisor: Luke Skywalker

History, Instructions

Basic information: Photo of Luke Skywalker, Initiator: Luke Skywalker, Applied on: 4/11/2017

Details: Category: Hardware, Title: New server and client machines, Description: We need some new hardware for the MDP2 project.

Additional opinions: Supervisor opinion: High priority

Requested items table:

Requested item	Qty	Price	Value	Comments	Additional cost	Actions
Low spec server	1	6,750.00 €	6,750.00 €	none		
MacBook Pro 13"	2	1,895.00 €	3,790.00 €	space grey		
			10,540.00 €		0.00	

Task details: Manager approval (Please verify the Purchase Request form submitted by your employee.)

Reports: BUDGET SPENDING, OTHER PURCHASE REQUESTS, FIXED ASSETS (ERP)

Purchases vs budget (YTD) chart:

Attachments: technical_specification.pdf (Created: 4/11/2017 11:41 AM (Luke Skywalker))

Comments

Task details

All documents in one place

Standardization also impacts the under-the-hood re-usability in a positive way, as it relieves the application developer from manual coding. For example, when configuring conditions and using external data sources, we recommend utilizing externally available constants instead of 'hard-coding' them into a condition.

If a condition changes, it is easier to change the constant only than to fix the code for all the conditions in all steps of the workflow. Or, you can use context variables as part of the configuration of actions (activities), instead of creating their copies. Nesting simple conditions within more complex ones instead of creating them from scratch is also a good solution, provided you know where they are used.

05 Application Development: Code vs No-Code

Promises vs. Reality

With the freedom and ability to tailor business applications that comes with no-code or low-code application development packages, one might question if coding is actually an obsolete idea. Organizations need to take into account that implementing changes in business applications requires time, which is not always available. And of course hard coding leaves the organization vulnerable to employee rotation. If not coding, then what? What about configuring?

Don't code, configure!

The point of a no-code platform is not to eradicate coding altogether, but about using code only where necessary in a specific context. All the basic elements of a business application can be arranged using business rules and the drag-and-drop interface of a low-code rapid application development platform like WEBCON BPS.

With their building block-like principles of operation, low-code platforms enable much more than just remarkable time to business, which represents ca. 15% of their potential benefits. The primary purpose of a low-code platform is not to reduce costs, but to optimize and boost business processes and to adapt and optimize business advantages in the long term.

This can only be done with the clarity and standardization offered by low-code platforms, both at the front- and back-end of business applications, and the resulting low learning curve for new users.

There is one caveat, however. Along with low-code platforms comes the idea of citizen developers, which simply means handing over application building to the end users. After all, if coding is not required anymore then anyone can, and perhaps even should, create applications, right? Well, not exactly.

Developer skills are not limited to simple coding. Building an application requires an in-depth understanding of causal relationships and analytical skills, to best optimize the business process that are to be digitalized. An individual user seeks out methods which best fits the, and them only. This is a far cry from the standardized, bird's-eye view perspective on business applications as tools to introduce and enforce best practices in an organization. The question every company needs to answer then, is: do we need an advanced personal calculator, or a solution that optimizes every business process and leverages the potential of the organization as a whole?

06 Why proper business application design matters

With organizations pressing towards the automation of increasingly complex actions, time-to-business for initial delivery is more important than ever. Gartner's experts predict that through 2018, 90% of organizations will lack a postmodern application integration strategy and execution ability, resulting in integration disorder, complexity and cost. Off-the-shelf solutions are simply not enough for modern businesses seeking a competitive edge these days.

What builds genuine business advantages are innovative processes, supported by change-ready software that can be modified within hours, not days or weeks. It is also simply easier to modify well-designed applications, and thus win the engagement of end users. Otherwise, insecurity builds up, which prevents business from growing and makes the end-user and stakeholders fed up.

So, how does change management change the game? Changes are inevitable for every application you build, not after you've delivered it but also during the delivery process. Secondly, the ease of introducing changes heavily impacts how applications are delivered, from a legacy waterfall approach to an agile and integrated DevOps approach.

The rapid change management offered by modern solutions like WEBCON BPS let you bridge the gap between IT and the rest of your business, creating an effective DevOps environment that builds a competitive business edge.



About the author

Lukasz Wrobel is the Chief Business Development Officer and Senior Vice President of WEBCON, the independent software developer behind the BPM/RAD platform WEBCON BPS. Throughout his career in the IT industry, he has become an expert in IT tools and management practices that improve the efficiency and performance of enterprises. He started his career at Comarch, where he was responsible for business intelligence and ERP systems.

Since 2010, Lukasz has played a key role at WEBCON, expanding the company from a local market leader into a global brand. His core priorities are to ensure client satisfaction and building a successful international partner channel. Privately, Lukasz is a humanist and technology enthusiast, whose hobbies include cars, photography, reading and drone flying

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