Automating Business Process With SharePoint 2013
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About GNet Group

Business and technology consulting services with deep experience, discipline and industry knowledge to deliver solutions that enable data driven decisions and organization wide collaboration

HQ in Minneapolis with offices in Des Moines, Dallas, and offshore development center in Pune, India

“Go-to Microsoft Partner” for Business Intelligence, Analytics and Data Management, and Portals and Collaboration

Finalist for Global BI Partner of the Year 2011
Agenda

• Business Process Automation Overview
• SharePoint 2013 tools for BPA
  ▪ Access Services
  ▪ InfoPath
  ▪ Apps/.Net
• Case Studies
Why Business Process Automation?
What is Business Process Automation?

Business process automation (BPA) is the technology-enabled automation of activities or services that accomplish a specific function or workflow.

From <http://searchcio.techtarget.com/definition/business-process-automation>
Levels of Automation

1. Information acquisition, selection, and filtering – Call your attention for action
   - KPI – Color coding
   - Spell Checker – Highlighting a misspelled word

2. Information Integration – Easy-to-interpret picture of relevant information
   - Dashboards
   - LOB system integration

3. Action selection or choice – System Makes Recommendations
   - Expert Systems

4. Control and action execution – System executes task (may or may not inform the human)
   - Robotics
   - Auto-Pilot
Things to consider...

1. What is primary purpose for automating?
2. Is the process well defined? (It depends…)
3. Is the process stable and efficient in its current state?
4. ROI - initial investment and ongoing maintenance costs
5. How much of the business process needs to be automated?
6. Consideration for the “human” element
   - Black Box
   - Feedback
   - Knowledge/Training
How do I determine automation candidates?

Are your processes...

• paper heavy
• manual and repeatable
• require manual duplication or manipulation of data
• subject to “hanging” because it is waiting for someone to complete a step
• routine tasks that are very time consuming
• subject to high error rates
Automation Process

1. Define your goals
2. Model current “as-is” process
3. Analyze process to determine if it is a candidate for automation
4. Optimize process for automation
5. Apply the appropriate technology
6. Implement and train
BPA Maturity
SharePoint 2013
SharePoint 2013 Automation Tool Spectrum

- **Microsoft Access Services**
- **SharePoint 2013 Apps**

- **Basic Out of the Box**
- **Microsoft InfoPath Forms**

- **Web Services**

- **Custom Apps, Webparts, Etc.**

Level of complexity, effort, usage difficulty, know-how required, time to put into production, feature richness and IT support reluctance
Access Services
SharePoint 2013 Tool Spectrum

Microsoft Access Services
SharePoint 2013 Apps

Basic Out of the Box Microsoft InfoPath Forms

Web Services

Custom Apps, Webparts, Etc.

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Microsoft .NET

Visual Studio

SharePoint

.NET
Why the Business Loves Access...
Why IT Does Not...

I happen to be working on a project to “fix” a MS Access database some genius business user created with a ton of crappy forms, redundant data, thousands of data anomalies, zero relationships, unimaginable naming conventions, and the craziest data structures I have ever seen in my life.

-Michael Triana, michaeltriana.com
Why IT Does Not...
The Future is Apps...
When creating an Access Services app you get...

- Cross-browser support
- Active Directory based permissions
- Branded Themes
- Centralized IT control
- App portability
- SharePoint Store for distribution
When creating an Access Services app you lose:

- Access Client Forms
- Custom Code
- Reports
- Some Linked Tables
User Interface and HTML Forms

- Access Generated Forms
- Browser Based
- HTML & JavaScript
Form Development

- Automatic generation of navigation, forms and buttons
- Drag & Drop Form Development
- User Experience
  - Validation Rules
  - Custom Actions
  - Conditional Logic
Access Architecture

Web Browser

Access Client

Excel

SSMS

SharePoint or Office 365

Runtime

Runtime

Design

Design

SQL Server or SQL Azure

ODBC Connection
SQL Auth: Read or Read/Write
Enabled Through Access Client
Database Translation

- Access App ➔ SQL Database
- Access Table ➔ SQL Table
- Access Query ➔ SQL View
- Access Field ➔ SQL Field
- Access Datatype ➔ SQL Datatype (renames)
- Access Expression ➔ SQL Expression (renames)
- Access Data Macro ➔ SQL Store Procedure/Trigger
Demo
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- Custom Apps, Webparts, Etc.
- Visual Studio
- SharePoint
- .NET

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InfoPath 2013 Client Based Technologies

- **InfoPath Filler 2013**
  - Used by End Users to complete the forms or “fill it in”
  - Can’t be used to design form templates
  - Need InfoPath client to use
InfoPath 2013 Client Based Technologies

InfoPath Designer 2013

- Used by Designers to design and publish form templates
- Easy to create
- Out of the Box Validation, Rules, Calculations, Logic, Formatting
InfoPath Form Services in SharePoint

- InfoPath Forms Services
  - Browser Based - Local InfoPath installation is not required
  - Forms available to the entire organization
  - Unified application feel
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Case Study: Adhoc Data Requests

Industry: Retail
Department: Human Resources
Number of Employees – 300,000+

Challenge:

• Department Business Intelligence team adhoc data requests grew to 2000+ per year
• Process consisted of clients calling the BI manager who would take down request information and pass to team for completion
• Poor quality due to inconsistent requirements gathering
• Long waiting period for data (No SLA or timeframe given to requester)
• No oversight of requests
Case Study: Adhoc Data Requests

Solution:

- SharePoint site to direct requestors
- InfoPath forms to formalize the data request process
  - Requestor contact information
  - Urgency of request
  - Data specific questions
- Workflows to notify request owner of new requests
- Views for team member and manager to see request status
Case Study: Adhoc Data Requests

Results:

• **Accuracy** - Standardized questions resulted in more accurate request fulfillment

• **Requestor Visibility** - Could see request status, and who was working on

• **Manager Visibility** – Could see how many request team is working on, due/over-due requests

• **Owner Visibility** – Tracking of all open & closed requests

• **Workload management** – See trends in data requests, peak request periods, highest requestors

• **Strategic planning** – Create self-service options for high demand data, staff/plan for peak periods, work with high requestors to satisfy data needs
SharePoint 2013 Tool Spectrum

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Least
Business User

Most
Pro Dev
Case Study: Police Union Contracts

Industry: Labor Management
Department: Legal
Number of Employees: ~25

Challenge:
• Labor union representing law enforcement personnel was using spreadsheets to capture contract information for comparison
• Inconsistent contract formats made standardization and data entry difficult
• Data is entered multiple times; the process is comprised of ninety-two worksheets
• Data is entered directly into the worksheets, not through forms or a “system”
• Cannot measure city to city, or county to county compensation consistently
• Poor data quality
Case Study: Police Union Contracts

Solution:

- Defined reporting and metric requirements
- Re-architected data structure (92 worksheets to 12 tables)
- Migrate to a sustainable platform – SQL Server
- Created InfoPath forms to control data entry
- Developed organizational reporting using PowerPivot
- Exposed SharePoint site to the Internet for remote access
Case Study: Police Union Contracts

**Results:**
- Eliminated duplicate data entry
- Increased data quality
  - Computer generated calculations
  - Visual cues and reminders to record all necessary contract information
  - Consistently entered data format and rules
- Ability to calculate new metrics such as “total compensation” and “lifetime earnings”
- Self-service reporting for business agents
- Could answer questions in the field “on-demand”
SharePoint 2013 Tool Spectrum

- Least: Microsoft Access Services, SharePoint 2013 Apps
- Business User: Basic Out of the Box, Microsoft InfoPath Forms
- Pro Dev: Web Services, Custom Apps, Webparts, Etc.

Level of complexity, effort, usage difficulty, know-how required, time to put into production, feature richness and IT support reluctance.
Apps for SharePoint are self-contained pieces of functionality that extend the capabilities of a SharePoint website. Apps integrate the best of the web and SharePoint; they are targeted and easy-to-use, and do a great job at solving a user need.
In SharePoint 2013....
The new cloud app model

Build a new class of apps that **extend** and **personalize** the way we **create** and **consume information** right from within Office and SharePoint

**New Apps**
A new class of apps enabling **new scenarios** and **new user experiences**

**Familiar Toolsets**
Embracing **Web standards** to provide developers **choice** and **flexibility**

**Flexible Lifecycle**
Deploy and maintain your apps publically on the new **Office Store**, or internally with **Flexibility and control**
App Hosting

Cloud-hosted apps
Get remote events from SharePoint
Use CSOM/REST + OAuth

Provider-hosted App
“Bring your own server hosting infrastructure”

Autohosted App
Windows Azure + SQL Azure provisioned automatically as apps are installed

SharePoint-Hosted App
Reuse web elements (lists, out-of-box web parts)
Client side technologies and declarative workflows

SharePoint Web
Host web

Your Hosted Site
Azure

App Web (from WSP)
SharePoint 2013 Development Example Scenarios

Farm Solution
- Fully Trusted
- Custom administration tools

Sandbox Solution
- Partially Trusted
- Workflow automating business process to entire site
- Custom site, list, & library templates

SharePoint Solution (*.wsp)

SharePoint Hosted App
- Expense Calculator
- Holiday Request

Provider-Hosted App
- Event Registration
- Help Desk Support
- Product defect tracking database

Auto-Hosted App

SharePoint App (*.app)
Case Study: Medical Financial Reporting

Industry: Medical
Department: Finance
Number of Employees: ~30,000

Challenge:
• Monthly financial reporting takes ~80 hours to create
• Requires hundreds of manual cut-and-paste operations
• Undocumented business rules
• Process relies on a single user’s expertise
• Significant opportunity for error
Case Study: Medical Financial Reporting
Case Study: Medical Financial Reporting

Solution:
- Create a centralized data store to house financial data
- Implement a rules engine (Microsoft MDS) to capture and apply business rules
- Create Microsoft .Net forms to capture non-relational data & augment rules engine functionality
- Create a tabular cube
- Host the forms and reports (Excel Services) in SharePoint

Results:
- Auditable & repeatable financial reporting process
- Reduce report creation time by an estimated ~95%+
Case Study: Medical Financial Reporting
Questions?

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Call to Action

• GNet Group’s Managed SharePoint Services
  ▪ Team closely with your organization to develop SharePoint solutions that align with the goals of your business
  ▪ Ensure you have the right tools to fit your organization’s needs
  ▪ Team centric approach
  ▪ Predictable cost and flexible
    • You choose the level of offering, and we will provide the SharePoint resources and unparalleled services