# NathCorp Pro-Tek

**Application development and automated testing services to ensure your application development needs are delivered on schedule and within budget.**

We follow an Agile methodology and apply this methodology to both the development and testing process, as well as the budget. Projects are tested every two-weeks for alignment with requirements and budget.

## A typical scenario......

**Application development or modernization projects are notorious for their lack of success – why?**

- Lengthy development cycles – development seems to "go on forever" with unexpected delays and sub-optimal results
- Cost over-runs – cycle length, combined with traditional "waterfall" development methods result in low cost / benefit ratios
- Poor pre-production testing – "buggy" applications move to production, resulting in frustrated users and high cost of in-production mitigation

## The Result?

**A long, costly application development project resulting in unreliable software and very lower user satisfaction and adoption levels!**

## Is there a better way? **Introducing NathCorp Pro-Tek Services - Rapid, Reliable Application Delivery!**

Our Pro-Tek offers comprise the following:
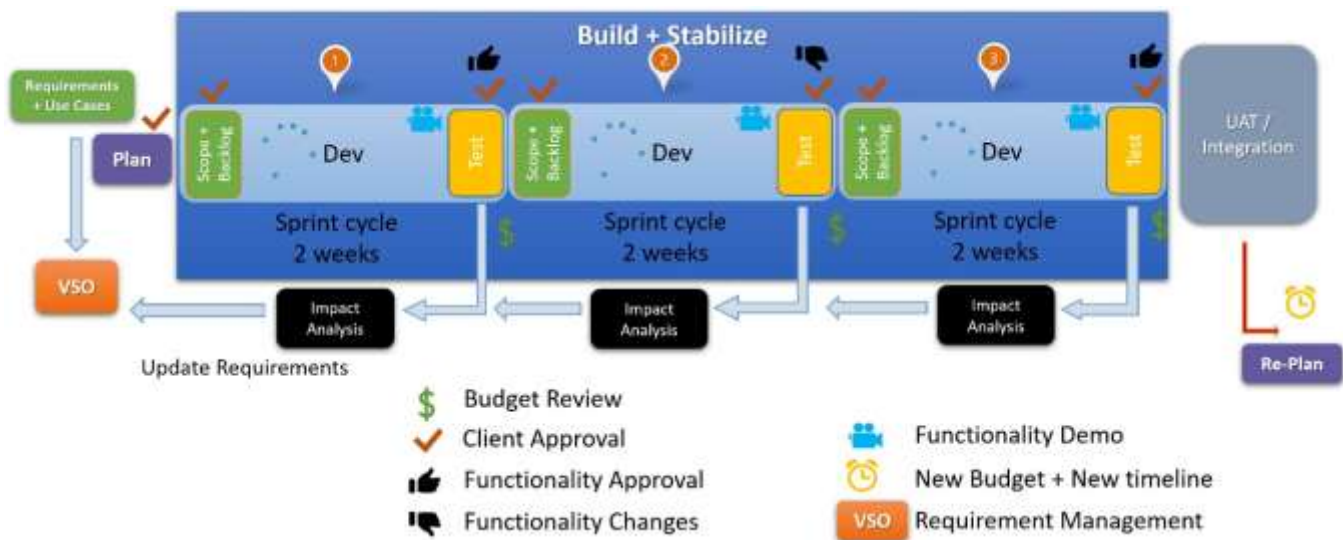
### Pro-Dev Application Development and Modernization

- Clearly defined application requirements and planning
- Agile approach using 2-week "sprints"
- Results delivered and demonstrated every 2-weeks Client feedback noted and incorporated
- Budget reviewed – actual versus estimates
- Impact analysis on possible requirements deviation – shared with client
- Structured code tracking, bug resolution – client has access to all key workflows

### Pro-QA Automated Application Testing

- Rapid feedback loops with automated notification
- In-depth and accurate automated test reporting – transparency to where it failed and why?
- Graphic summary and test execution report over mail.
- Aligns with Pro-Dev for "early and often" test results
- Testing for both functional and non-functional requirements
- Test for expected results AND application scalability
- Process easily adapted to multiple applications

# The Pro-Tek Approach



- $ Budget Review
- ✓ Client Approval
- 👍 Functionality Approval
- 👎 Functionality Changes
- 📷 Functionality Demo
- ⏰ New Budget + New timeline
- VSO Requirement Management

## A Sampling of Our Skills

**Application Development (Web and windows):**
- Agile approach using 2-week "sprints"
- C#.Net (Web and Windows Apps)
- Angular and Node JS
- Scripting: PowerShell, Vbs, Php
- CMS: Drupal, WordPress

**Application Development (Mobile):**
- Xamarin (.iOS/.Android)
- Android studio (Kotlin)

**Application Development (Cloud):**
- Azure web: Azure App Service, Logic
- App Azure Networking: Azure vNet, Application gateway, Azure Load Balancer
- Azure Compute: Service Fabric Cluster, Function App
- Azure redis cache

**Database Management Systems:**
- Azure Database: Azure SQL, Azure Cosmos DB
- MSSQL, MySQL
- MongoDB, SQLite

**Automation**
- Azure Automation Runbooks
- Selenium- Open source

**Analytics:**
- Azure Analytics: Power BI
- Azure logs and analytics

**AI/ML:**
- Azure AI/ML: Web App Bot
- Cognitive APIs (Speech recognition & Synthesis)

**Security:**
- Identity: Azure AD, Azure AD DS, Azure IAM, Azure B2C
- Encryption: SHA256, MD5
- Protocols: Https

**Source Control:**
- Azure DevOPs (TFVC, Git)

**Application Deployment:**
- WiX, InstallShield
- Azure DevOPs CI/CD Pipelines

**Application Testing:**
- Visual Studio 2019
- ProcMon
- NetMon
- Fiddler
- Postman

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**1** ### Business Challenge

A Fortune 100 manufacturer needed to make their home air filtration products "smart" – adding a complete set of functionalities to allow the filters to communicate replacement timing based upon local environmental factors

### What we Delivered

A fully integrated application using a Bluetooth sensor built into the filters to communicate with a smartphone app, considers current airflow and atmospheric conditions (high pollen, smog, etc.) and connects to a cloud-based database for client and configuration information

### The Business Benefit

A **3X increase in** retail filtration **revenue**

**2** ### Business Challenge

A major airline needed to convert their paper flight manuals to electronic, while ensuring frequent updates are distributed, applied and tracked for FAA audit purposes. If aircraft are found non-compliant, FAA regulations will not allow the flight to depart, costing the airline $300,000 or more!

### What we Delivered

A flexible content distribution system designed to operate in a highly mobile, low bandwidth environment. Pilots are able to "subscribe" to only the flight manuals needed, compare new and old versions of manuals (with "red, yellow, green" signaling), and mark up and comment; updates are distributed "silently" as devices make a secure connection. Content publishers can distribute all files types and select the user(s) receiving the content; all actions are tracked and recorded to ensure full regulatory compliance and transparency.

### The Business Benefit

The airline removed over 200lbs of paper manuals from each flight, resulting in **fuel savings of over $1 million annually**, while ensuring 100% compliance with FAA regulations.

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