

# PENNSYLVANIA CYBER CHARTER SCHOOLS

## “Processing Of State Testing Booklets Made Easy”

### THE OPPORTUNITY

The Pennsylvania Cyber Charter School was performing their state testing process using Excel spreadsheets and an old Access database. With Access not being as user friendly, and the Excel spreadsheets requiring aggregation, PACyber asked BTPros if they could come up with a more modern and user-friendly solution. The process involved a multi-faceted process:

1. Processing a list of state testing booklets that were provided by a 3<sup>rd</sup> party.
    - a. This list contained tens of thousands of records that took hours to process.
  2. Validating the received booklets and comparing the list with what was received.
  3. Scanning barcodes matching to either a bundle of booklets or an individual booklet.
  4. Shipping a predetermined number of booklets to various testing locations.
  5. Verifying receipt of the booklets at the testing location.
  6. Recording student attendance and test statuses.
  7. Shipping the completed test and answer booklets back to the 3<sup>rd</sup> party processing company.
  8. Reporting throughout the process to ensure traceability and accountability.
- **Need #1: Streamline and simplify the current process.**
  - **Need #2: Attempt to leverage existing licensing and expenditures without incurring additional licensing or subscription costs.**
  - **Need #3: Upgrade the existing process to utilize modern technologies.**
  - **Need #4: Training and knowledge transfer to allow for self-administration of the application post-project delivery.**

### THE SOLUTIONS

- **Recommendation #1: Utilize Microsoft Products and Applications**
- **Recommendation #2: Purchase a 3<sup>rd</sup> party software package.**
- **Recommendation #3: Develop a custom application from the ground up.**

## OUR PROPOSAL

BTPros recommended utilizing a combination of Microsoft products to achieve all needs mentioned above and more:

1. **Power Apps** to provide the front-end interface.
2. **Power Automate** to perform the workflow and processing.
3. **SharePoint** and **SQL** services to store data.

## RATIONALE

Using a 3<sup>rd</sup> party solution would not provide PACyber with the customized and tailored solution they need to perform the required processes effectively. Multiple packages, from different vendors, would have been needed to accomplish the requirements. This would have incurred a significant and subscription-based expense through these vendors.

Developing the application using custom programming, although an option to provide a tailored solution, would not have allowed PACyber to perform application changes on their own. They did not have the skillset in-house to make incremental changes, not to mention significant updates, to the application after a brief knowledge transfer session.

## EXECUTION STRATEGY

Our execution strategy incorporates proven methodologies, extremely qualified personnel, and a highly responsive approach to managing deliverables. The following is a description of our project methods, including how the project will be developed:

- **CLARIFY** – Understand business needs, long-term goals, competitive landscape, and operating/technical environment. Agree on business objectives and success criteria.
- **ARCHITECT** – Conceptual design of application and identify potential risks. Create the initial project plan.
- **DESIGN** – Functional specification of application, integration, and user interface. Mitigate risks.
- **DEVELOP** – Finalize project plan and team roles and responsibilities. Build the product.
- **TEST** – Perform high-level testing before handing over to client to perform more detailed testing.
- **LAUNCH** – Manage change control processes. Go-Live and provide end-user and administrative support.
- **ENHANCE** – Monitor and analyze solution against defined success criteria. Present recommendations for the next release of application enhancement.

## EXPECTED RESULTS

We expect our proposed solution to provide the following benefits:

### Financial Benefits

- **Result #1: Minimize the time spent manually processing tens-of-thousands of booklets.**
- **Result #2: Minimize the time spent by team members processing, validating, shipping, receiving, and returning the state testing booklets.**
- **Result #3: Maximize the ROI when comparing previous state to new state.**
- **Result #4: Provide easy feedback and reporting of data.**

### Technical Benefits

- **Result #1: Streamline the current manual process.**
- **Result #2: Provide at minimum, the same functionality. Ideally provide more functionality than the current system offers.**
- **Result #3: Provide a process and system where incremental changes can be performed by knowledgeable power users.**

## THE RESULTS

BTPros worked closely with the stakeholders to understand the existing process and track what minimum functionality is required. We also recorded the functionality that was nice to have but wasn't essential.

Additionally, BTPros documented functionality that was **not** part of the current system that the stakeholders would have liked. These 3 categories of functionality were further detailed out and confirmed by PACyber.

BTPros took the final set of functionalities and developed the application using a multi-screen Power App form with tabs to navigate between them. Each tab provided specific functionality and certain areas were secured using the login credentials. We were able to build all the needed functionality, remove what was no longer used, and add in additional 'desired' functionality.

The result was a seamless application that was easily understood by new users who had never used the application.

The client said the new application saved countless hours and was much faster and easier to use. From the onset, the new system processed the tens of thousands of booklets in minutes instead of hours. The compartmentalization of the different functionality was well received and allowed users to quickly get to where they needed to work. The feedback the new process provided was "an amazing addition" that reduced errors and allowed for quality checking and validation while scanning.

Overall, this project was a resounding success for both BTPros and PACyber.