NUCLEUS RESEARCH

ROI: 923%
Payback: 1.2 Months

DATAWATCH

PENTAGON FEDERAL CREDIT UNION

ANALYST
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THE BOTTOM LINE

Pentagon Federal Credit Union (PenFed) deployed the Datawatch Monarch platform to modernize its data management and analysis capabilities. The company realized dramatic time savings with one team saving over 200 hours in a year from simpler workflow mechanics and task automation on the platform. Most strikingly, using the analytics on the platform allowed PenFed to negotiate a dramatically improved deal with a vendor, resulting in savings of $13 million. Since deployment, the organization has seen an overall change of culture; the data analysis capabilities and ease-of-use of the platform have contributed to a culture of trust and confidence throughout the organization.

THE COMPANY

Pentagon Federal Credit Union (PenFed) is a financial services company that specializes in serving affiliates of the military. Founded in 1935, PenFed is headquartered in McLean, Virginia and maintains 50 locations around the United States and at U.S. military bases around the world. The company serves over 1.6 million customers and manages more than $24 billion in assets. It offers a full range of financial services to members including home, auto, and personal loans, checking and savings accounts, and credit cards.

THE CHALLENGE

PenFed has been a Datawatch customer since 1996. Before this project began, PenFed had been using Monarch Classic, a legacy product. That product was reaching end-of-support and so the company needed a replacement that could handle its data management and analysis demands. An analyst at the company had been exposed to the next-generation suite of Monarch products and was impressed with the capabilities. As he learned more about the platform, he found that it didn't require direct ownership like many legacy products, lowering the total cost of ownership by reducing the need for internal platform support and administration.

As the company learned about the modern Datawatch offerings, it saw the particular benefit of Monarch Swarm for enabling PenFed's transition to an increasingly data- driven organization. Monarch Swarm is built around team-based data preparation with machine learning and automated capabilities, and the organization saw the benefit of unifying data across departments and equipping cross-functional teams with the data, analytical, and collaborative tools needed to unearth and act on new insights.

Additionally, the company found that it could replace command line scripting with a drag-and-drop workflow on the new platform and could eliminate batched data uploads in favor of continuous updates. As more decision makers at the company realized the potential benefits of upgrading to the Monarch suite, the decision was made to move forward in June 2016.

Cost : Benefit Ratio | **1 : 26.7**

THE STRATEGY

PenFed began the implementation of the full Monarch suite in June 2016. When Monarch Swarm became available, the decision was made to deploy it to bolster the existing solutions in December 2017. The project lasted six months until it went completely live in January 2017. There are currently 50 active users on the platform.

The implementation was executed internally and led by two employees sharing the workload in coordination with the IT department. One of the leaders focused primarily on

demonstrating the product capabilities to executives and potential users to generate internal support and excitement for the project. The other handled the technical configuration of the software and the new servers. PenFed purchased professional services from Datawatch to support the implementation in a primarily knowledge-sharing role to share best practices. The professional services company helped design the training program; however, it was carried out by the PenFed employee leading the deployment.

When the platform went live, all new users were given four days of preliminary training and demonstrations to exhibit the product capabilities. On an ongoing basis, the project leader still provides an average of five hours of user training per month. The platform has users in departments across the business including accounting, finance, operations, payments, marketing, credit risk, lending opportunities, IT, fraud, human resources, mergers and acquisitions, and procurement. Since the deployment went live, PenFed has seen and maintained 100 percent user adoption – up from 40 percent adoption of the legacy solution.

TYPES OF BENEFITS

Direct 69% 31% Indirect

KEY BENEFIT AREAS

Key benefit areas seen as a result of the Monarch deployment include: cost savings from leveraging data in vendor negotiations, additional revenues generated by offering a new lending service enabled by the Datawatch insights, a more collaborative and data-centric culture, and increased user productivity from time savings by eliminating command line scripting in favor of drag-and-drop as well as repeatable process automation.

- Cost savings from data-backed negotiations. PenFed received a bill from a vendor totaling $14 million and needed to access its usage data to prove compliance in order to reduce the bill. With the Datawatch solutions, the company was able to pull the required files and resolve the discrepancy, reducing the bill to $1 million.

- Additional revenue generated by a new lending program. With improved data sharing and cross-departmental analysis capabilities from leveraging Monarch Swarm, PenFed was able to connect teams from legal, IT, compliance, and analytics to create a new "Charged Off Loan Sales" program. The tool was able to automatically compile a list of the loans to be sold and has already generated $7 million in revenues since its inception from the selling backlogged loans. Moving forward, the initiative is expected to generate approximately $500,000 monthly from up-to-date loan sales.

- Increased user productivity. PenFed has documented impressive time savings for users stemming from the deployment. One team in card operations saved approximately 200 hours from improvements to the workflow using the Monarch suite. PenFed was also able to automate the closure of overdrawn accounts and eliminate the manual processes. Still another user in the HR department spent 8 hours weekly creating a specific report manually using Microsoft Excel – with Monarch Swarm she can generate the same report in 15 minutes.

- Culture change. Since deploying the Monarch suite, leaders at PenFed have recognized a more trusting, collaborative, and data-literate culture at the institution. Monarch Swarm makes it easy for users to access and share the data and models that they need. As users around the company have been made more aware of the solution's capabilities, they have become more data-oriented.

CUMULATIVE NET BENEFIT
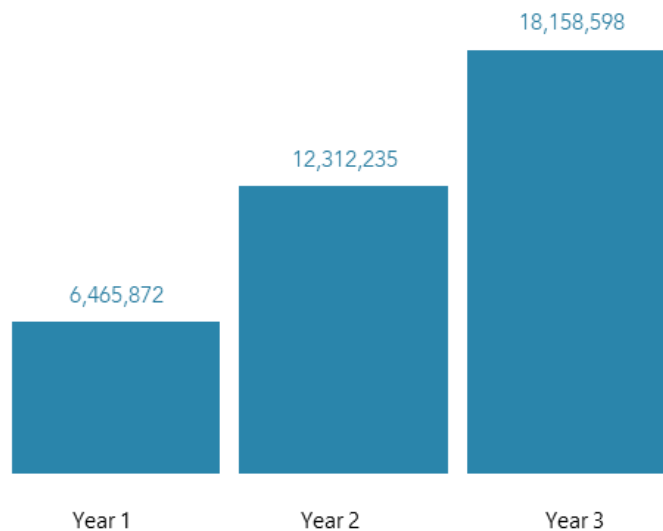
KEY COST AREAS

The largest cost area of the PenFed deployment was the purchase and configuration of the Datawatch software. Other cost areas over the three-year period included the price of new servers, professional services to aid in implementation and training, personnel time for the employees who executed the implementation, and employee time spent being trained on the new system.

LESSONS LEARNED

With a large-scale technology project such as this, it is important not to neglect the human side of the change too. Demonstrating the product capabilities and laying out realistic

expected benefits and outcomes to build executive support was vital to moving this project forward. As the prospective users became aware of what the platform could do, they became excited and eager to adopt, which expedited the onboarding and training processes.

Another key driver of benefits for this project is PenFed's willingness to embrace task automation. As computers become capable of autonomously performing increasingly complex tasks, an industry-wide disconnect is forming in the financial services industry between what computers are able to do independently and what they are allowed to do independently, due to problems with accountability and explainability. By allowing the Monarch platform to autonomously prepare lists of loans to sell and overdrawn accounts to close (as examples), PenFed has seen tremendous financial and productivity benefits. It is important to create well- defined processes with final human oversight to ensure accuracy – obviously a critical factor when dealing with financial transactions.

This deployment highlights the value in connecting data and teams across business departments. With Monarch Swarm, PenFed was able to foster a team-based data sharing environment that enabled cross-functional teams to break down silos and lead new data-driven initiatives. Teams from different departments were able to share data and models via the cloud and collaborate on complex projects like the new lending program to generate significant revenue for the institution.

CALCULATING THE ROI

Nucleus Research analyzed the costs of software, hardware, personnel, professional services, and user training over a three-year period to quantify Pentagon Federal Credit Union's total investment in Datawatch technology. Direct and indirect benefits were also quantified over the three-year period.

Direct benefits quantified include the cost savings realized from data-backed negotiations with a vendor.

Indirect benefits quantified include the additional profits generated from the new lending arm PenFed was able to open using the insights provided by Datawatch. An additional indirect benefit is time saved by users from drag-and-drop mechanics over command line scripting and automating repeatable processes. We calculated the time savings benefit using the fully loaded cost per hour of employees. Time savings were multiplied by a correction factor to account for the inefficient transfer of time between time saved and additional time worked.

Benefits not quantified included the adoption of a more trusting and data-literate company culture. There is a far greater level of trust in users' ability to access and understand the data they need, and there is an overall higher degree of confidence in leveraging data to support business decisions.

FINANCIAL ANALYSIS

Annual ROI: 923%
Payback period: 0.1 years

BENEFITS	Pre-start	Year 1	Year 2	Year 3
Direct	0	5,000,000	4,000,000	4,000,000
Indirect	0	2,154,763	1,854,736	1,854,736
Total per period	**0**	**7,154,763**	**5,854,736**	**5,854,736**

COSTS - CAPITALIZED ASSETS	Pre-start	Year 1	Year 2	Year 3
Software	0	0	0	0
Hardware	0	0	0	0
Project consulting and personnel	0	0	0	0
Total per period	**0**	**0**	**0**	**0**

COSTS - DEPRECIATION	Pre-start	Year 1	Year 2	Year 3
Software	0	0	0	0
Hardware	0	0	0	0
Project consulting and personnel	0	0	0	0
Total per period	**0**	**0**	**0**	**0**

COSTS - EXPENSED	Pre-start	Year 1	Year 2	Year 3
Software	381,730	0	0	0
Hardware	100,000	0	0	0
Consulting	49,250	0	0	0
Personnel	91,125	0	0	0
Training	58,413	8,373	8,373	8,373
Other	0	0	0	0
Total per period	**680,518**	**8,373**	**8,373**	**8,373**

FINANCIAL ANALYSIS	Results	Year 1	Year 2	Year 3
All government taxes	45%			
Cost of capital	7.0%			
Net cash flow before taxes	(680,518)	7,146,390	5,846,363	5,846,363
Net cash flow after taxes	(374,285)	3,930,515	3,215,500	3,215,500
Annual ROI - direct and indirect benefits				**923%**
Annual ROI - direct benefits only				636%
Net Present Value (NPV)				8,732,441
Payback period				**0.1 years**
Average Annual Cost of Ownership				235,212
3-Year IRR				1033%

All calculations are based on Nucleus Research's independent analysis of the expected costs and benefits associated with the solution.