



Purchasing Report System

MacAulay Brown (MacB) is a defense contracting company which focuses on advanced engineering, cybersecurity, and product solutions. To improve their daily operations, the UD Senior Project Team has been assigned to design, create, and implement a new purchasing system to fit within their current process. The current process consists of a series of forms, DOA approvals, status emails, and various purchase justifications.

The new purchasing report system will support Advanced Technology Group (ATG) divisions, customers, and suppliers. The system will provide a fully operational approval system in which the different divisions and departments of MacB can each approve, update, and pass the purchase request to the next group. The purchase request begins when the requester fills out an electronic SharePoint form asking for supplies. This begins a long approval, justification, and pricing process. After price analysis, the purchaser will begin receiving quotes from the bidding companies. The best bid will receive the contract. The product then ships, arrives, and undergoes a quality check. A final confirmation of a completed purchase is needed. MacB would like an implemented notification system where users are alerted along the process of a contract as it moves through the different stages. MacB would also like the purchasing report system to be created through Microsoft SharePoint.

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SEEPEx.

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Map Visualization Tool

Seepex is a specialist in pump technology, specifically progressive cavity pumps, macerators and control systems that are used to convey low to highly viscous, aggressive or abrasive media at low pulsation rates. The UD Senior Project Team will create a tool that enables to users to visualize sets of data pertinent to Seepex operations. The tool will provide overlays, which will be determined by user stories, for operations in North and South America. The map will be implemented on the Seepex intranet for use across multiple departments. Upon finishing the internal map solution, the next task is to improve the distribution map on the main Seepex site.

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Company Work Processes Storage Repository

Triad Technologies, LLC is an Ohio-based distributor of hydraulic, pneumatic, electromechanical, filtration and lubrication technologies. The UD Senior Project Team will design and implement a Knowledge management system (KMS) for Triad that contains and centralizes procedures, instructions, and the employee directory. Triad management has already assembled focus groups of employees to identify what the employees find important, especially regarding communication. The UD Team will interview each Focus Group leader to ensure the system is designed to fit the company's specific needs of its people. The Team will build a system to organize the given documents in a way that makes it easy to use both now and in the future.

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Task Order Tracking System

Riverside Research provides service contracting to many government agencies using a blanket purchasing agreement. Because of their blanket purchasing agreement, each task order (TO) that comes of this is different. Even though each task order has a different end goal, they all follow a monotonous process towards completion. The method that Riverside Research currently uses to track their task order process is an Excel document that is only updated by upper level project managers. This is proven inefficient because this denies all people who work on the task orders timely updates on their assigned TOs.

Riverside Research would like the UD Senior Project Team to implement a web-based contract action tool (CAT) to track each task orders therefore it makes it easy for employees to update the status of the task order. There will be no more than 10 users to use this tool. Each task order will be assigned to one of the 10 users, who will be the mission lead (ML) of that TO. The specific information regarding each task order will only be visible to the administrator of the contract action tool and the users assigned to that specific TO. The system that is implemented must be capable to create subtasks subsequent to the parent tasks. The new tool should also have the ability to write notes and attach documents within each individual project or task. It should also be able to indicate to the user where each task order is at in the subcontracting process.

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Enterprise Product Document Distribution System

Tyler Technologies' is a software developer that provides integrated appraisal and tax software and services. Tyler needs a large enterprise type solution to store and disperse related product documents associated with iasWorld, a property appraisal and tax work web-based, software solution. Content related to training, documentation, architecture information, etc. are currently scattered within SharePoint, Confluence, and Windows Directories, leading to workflow inefficiencies for various information consumers. The goal is to assist Tyler in designing a single user-friendly system for employees and clients to find relevant content to maximize employee efficiency.

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Business Process Documentation Project

VARtek is a technology company that serves K-12 school districts and other educational organizations, designing and managing school technology environments. The UD Senior Project Team will work to optimize documentation of at least 10 business processes management to help standardize and discern inefficiencies. Students will review current documented processes and conduct business process walkthrough sessions with employees ranging from departments such as sales, project management, and IT. The team will use Microsoft Visio for mapping, but will also research other options. If time permits during the year, the team will also create a dashboard for process management in SmartSheets.

University of Dayton Senior Project Team

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Faculty Grant and Research Activity Tracking

The Air Force Institute of Technology (AFIT) is a graduate school and provider of professional and continuing education for the United States Armed Forces and is part of the United States Air Force. AFIT would like to track their faculty members' involvement in grants and research. This would include ongoing projects, which staff is involved, and what students they have under them. Currently they have no system at all to track this so anything is better than nothing. Ideally they would like this on a separate machine in prototype form so they can give it to their own IT department to implement in their system. A simple interface to add and view projects and people involved are the key takeaways.

University of Dayton Senior Project Team

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Application Reference Tool Project

Located in Dayton, Ohio, Dayton Children's Hospital provides primary and specialty health care services for infants, children and teens. The UD Senior Project Team will undertake to use the Gartner IT Vendor Segmentation methodology to categorize roughly 300 applications supported by the Dayton Children's IT Department, and build an application support reference tool in SharePoint Online that will serve both IT staff and all DCH's customers. The project will be completed in two phases. During the first phase the team will identify the 300+ applications that will be in scope for an application reference tool built in SharePoint. The second phase of this project will focus largely on the development of the SharePoint solution. In addition to the build of the solution, the client expects our team to develop policies and procedures for the SharePoint database to ensure that it is handled responsibly by employees following its implementation. Finally, the team will be involved in the knowledge transition to the DCH IT team to ensure that they have a complete understanding in the solution.

University of Dayton Senior Project Team

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Inventory Management System

Crane Consumables manufactures barcode labels for a wide variety of industries. In this capacity, they require inventory management solutions beyond that of a typical manufacturer. Crane is requesting a customizable inventory management system that will decrease manual entry, increase efficiency and improve inventory accuracy, all while being accessible to key employees from mobile and tablet devices. Currently, employees are using an inventory management system (LabelTracks) that lacks customization. This leads to questionable inventory data for management and those on the floor.

The team at Crane has proposed that the UD Senior Project Team implement FileMaker, which is an off-the-shelf solution that allows for the customization that Crane is looking for. Development documentation is sufficient and the UD team and a group at Crane would be able to add onto the software as needed.

University of Dayton Senior Project Team

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Project Tracking Workflow System

Ohio Health is a nationally recognized, not-for-profit, charitable, healthcare outreach of the United Methodist Church. The UD Senior Project Team will develop a model for OhioHealth's demand process to better allocate human resources, manage new projects, and reduce resource waste.

Currently, OhioHealth has an inefficient system of prioritizing projects and allocating resources from the time an idea is suggested until when the demand is approved. Due to an undefined workflow system, a high number of annual demands, and a reduction of grants from the government, OhioHealth has a goal of increasing efficiency by addressing demand appropriately. The UD Team will develop a functional dashboard to track progress of each demand, which will be qualified, quantified, and scored (ranked) in order to determine its business value, and by extension, whether or not it will be pursued.

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