



## When Carnegie Mellon University comes to you for help in **modernizing their software systems**, you hit the books hard.

### **A GRADUAL MODERNIZATION PLAN FOR A GLOBAL INSTITUTION.**

Working with an internationally renowned university that is putting robots on the moon is nothing less than daunting. But when Carnegie Mellon's 20-year-old Student Information System (SIS) began to show its age amidst rapid expansion, increased demands from students, and inquiring parents located around the globe, they came to Summa for some academic support. We started by sitting down with system administrators, identifying immediate software needs, and mapping out a plan that was smart in the short-term, and built for long-term growth.



# IT ALL ADDS UP TO A BETTER STUDENT EXPERIENCE AND A SMARTER PATH TO THE FUTURE.

## THE SITUATION:

Carnegie Mellon’s proprietary 20-year-old SIS was fast outgrowing its architecture. Maintenance costs, support issues and knowledge management concerns were growing, and Carnegie Mellon knew a change was needed. But the traditional strategy, big-bang replacement with a packaged educational ERP solution, posed risks of its own. Was there a way to meet current and future needs while keeping up with the university’s fast-paced, learning-driven culture?

## + THE SUMMA SOLUTION:

Summa and Carnegie Mellon worked together to build a roadmap for incremental modernization. Our approach included strategies for modernizing applications, replacing obsolete code, building in flexibility through the application of a Service Oriented Architecture, and rigorous, automated testing. We introduced a Rich Internet Application platform and applied user experience design techniques to create an engaging user interface. Our Scrum Agile Project Management helped streamline software development cycles. Key to success was a shared culture of asking hard questions, testing the answers, learning from the results and moving on. The resulting architecture is now delivering immediate business value, mitigating risk and, most important, getting positive adoption by students and administration alike.

### Maximum effect + Minimal risk

Smart solutions designed to upgrade the system, not upset the user.

### New functionality + No impact on legacy systems

Transitional architecture allowed for new functionality without affecting existing systems.

### Immediate answers + Long-term capabilities

Addressed current architectural gaps, while creating an open, agile environment for the future.

### Internally supported + Incremental savings

A scalable solution implemented and maintained internally saves in the long run.

### Results-driven solutions + A collegial approach

Realistic strategies developed through collaboration and shared learning.

### THE SUMMA DISCIPLINES:

- Architectural assessments
- Design sessions
- Strategy roadmaps
- Rich Internet Application and User Experience expertise
- Scrum Agile Project Management
- Proof of Concepts

### THE RESULTS:

- Significant avoidance of ERP software licensing costs
- Mitigation of rising legacy maintenance costs
- Modern user interface and improved user experience for students and administrators

### THE FUTURE:

Flexible, agile architecture can support rapid development of new functionality to match Carnegie Mellon’s fast-paced and dynamic intellectual environment. Project introduced agile new approaches to planning and thinking that spill over from software development to other activities.

*"This was a collaborative process from the outset, and it continues to be today. Summa worked closely with our whole team to understand our complex technology requirements, our unique culture and our business objectives. We appreciated their ability to adjust quickly to changes, grasp what our users needed, and design solutions that got the results we were looking for."*

— Joel Smith, Chief Information Officer, Carnegie Mellon University