ATLAS Rollout Aug 2010 Lessons Learned (DRAFT)

Fresno Unified School District
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SUMMARY

This document provides a summary of the lessons learned during the rollout of the ATLAS Student Information System built by Fresno Unified and Microsoft over a 14 month period with conversion to ATLAS at the start of school in August 2010. The primary challenges, responses and lessons learned were:

1. Creation of an ATLAS Strike Force Team
2. No communication infrastructure built around the rollout
3. Little or no training of teachers and admin was done
4. All components of ATLAS were not finished
5. Security Roles were not granular enough
6. No effective channel for feedback or problem reporting
7. Parent Portal was limited to one school for the first 8 months
8. There was competition for resources from other IT projects
9. Microsoft Consulting Services' approach to the project
10. Performance testing and monitoring were implemented late
11. Expectations for a massive conversion were not set correctly

TIMELINE

Prior to conversion to ATLAS, the district's SIS was on a Mainframe. Powerschool ran in front of the mainframe for grades 7-12 posting changes nightly. In elementary schools, attendance and grades were paper-based and were posted to the mainframe by office staff on a weekly basis. From 2007-2010, the network was upgraded from old T1 lines to fiber optic and wireless was added for all classrooms.

Jun 2009	Contract signed with Microsoft
Jun 2009 – Nov 2009	Project start-up, interviews with 500 teachers, Database defined and created
Nov 2009 – Jun 2010	Combined Microsoft/Fresno Unified development team built ATLAS
Jul 2010 – Aug 2010	Most of Microsoft team leave and development continues with district team
Aug 2010	Conversion of Powerschool and Mainframe files to ATLAS, Start of School
Aug 2010 – Nov 2010	Dealing with thousands of issues related to the 11 problem areas identified above
Dec 2010	Turnover of ATLAS to newly created ATLAS Team, Apology to teachers & leaders Halted major and minor releases and focused on bug fixes
Dec 2010 – Jan 2011	Creation of ATLAS Online Support tool for reporting problems
Jan 2011 – Apr 2011	Development and testing of next ATLAS Release including new Security System
May 2011 – Jul 2011	First Major ATLAS Release after turnover, development of next ATLAS Release
Aug 2011 – Sep 2011	Second Major ATLAS Release, Start of School
Oct 2011 – Dec 2012	Critical bug fixes resolved, Development of final major ATLAS Release
Jan 2012	Final Major Release of ATLAS under control of ATLAS Strike Force Team

1   CREATION OF AN ATLAS STRIKE FORCE TEAM

In December a special strike force team was put together to address the ATLAS conversion issues. The leadership of ATLAS was turned over to the newly created ATLAS team including communications, development, testing, and release content. The team was headed up by Lindsay Sanders, a high school Vice Principal on Special Assignment who was a strong leader who also had background in master scheduling. Dr. Joel Rabin, an Administrative Analyst from the Superintendent's Office, was assigned to help create a structure for the team and develop processes to improve communication and workflow. Eric Tilton, an IT senior manager was assigned to help identify and resolve technology issues as well as design and program workflow solutions. David Jansen, an IT leader, was moved over and took over management of the software developers. A critical addition, were the four Teachers on Special Assignment (TSA) who were brought in from the field to provide subject matter expertise (SME) as well as testing and support capabilities. Having teachers respond to teachers changed things significantly because now the staff who responded to teachers' issues were teachers and understood immediately what the challenge was. Finally, one of the Helpdesk staff was brought over to provide front-line support of issues sent into the new ATLAS Online Support System that had been developed by Joel and Eric.

2   NO COMMUNICATION INFRASTRUCTURE BUILT AROUND THE ROLLOUT

Problem: Prior to conversion, no communication plan was developed. Multiple meetings with the Communications department, which had recently had their top leader leave, didn't produce a plan. There was little productive communication with other departments, even those that had a lot at stake in the conversion, including School Leadership and Support Services. This was a key challenge – without a solid communication plan in place prior to conversion and after conversion, the IT department became the default communications channel, which it was poorly suited for.

Response: When the ATLAS Strike Force team was created in December, one of the top Communications department staff, Sam Bauer was assigned. She immediately created and implemented a communications plan along with new channels for communications with the schools.

3   LITTLE OR NO TRAINING OF TEACHERS AND ADMIN

Problem: This was one of the most significant issues impacting the conversion. When surveyed, teachers reported receiving between 0 and 30 minutes of training on ATLAS. With 3,500 teachers switching to a new student information system and half of those coming from a paper-based system, hours of training should have been required. The Professional Learning department was not involved, so the training was left up to a small instructional technology group of 4 individuals who reported to Support Services and had never implemented a district-wide implementation before.

Response: The addition of four TSA's to the ATLAS team to provide support and training also had a huge impact on teacher understanding of how ATLAS worked. Training materials were developed and provided by the ATLAS Team, training issues were handled through the new ATLAS Support System and the Professional Learning department was engaged to assist with development of some of the materials.

4 ALL COMPONENTS OF ATLAS WERE NOT FINISHED

Problem: The first 5 months of the project were spent primarily on doing interviews with over 500 teachers individually and in groups to identify what was needed in an SIS. While important, these interviews could have been done in two months and had a similar impact. Instead, development was delayed 3 additional months out of a 14 month project in order to capture the input. There were far more features that were identified than could be delivered – and many critical features that were necessary for conversion were not brought up. As a result, features like printing a document off for parents to sign during the process of suspending a student were left off of the feature list and weren't identified until the first week of school. It took two months after conversion to complete the base feature list. In addition, there were a few low-performers on the development team that lowered the velocity of development even more.

Response: In December, the ATLAS Team worked with schools to identify the most important features that were being requested and began designing and developing them for the April Release. The low-performers were replaced with high-performing developers that increased the velocity for development of bug fixes and key features.

5 SECURITY ROLES WERE NOT GRANULAR ENOUGH

Problem: In the early design of ATLAS it was determined that there were only 5 basic security roles that were needed: Teacher, Principal/VP, Counselor, Registrar and District Administrator. It was felt that all other roles would fit under those 5 roles in determining what could be accessed in ATLAS. After conversion, it became clear that the limited roles had two major impacts: some people were not able to perform their job because they were assigned to a role with less access and others were able to do more than they should have been able to, creating unwanted security risk.

Response: A thorough redesign of the ATLAS security system was undertaken which increased the number of roles to 63 and also inserted hundreds more security access points in the code to make control more granular. Security and access to ATLAS was determined by position type in the HR system and how an employee was set up in HR determined their access. A multi-disciplinary Security Review Committee (SRC) was created, led by an HR manager to handle requests for exceptions or modifications to the new security roles. The SRC has rarely granted an exception and the definitions of the new security roles has remained intact.

6 NO EFFECTIVE CHANNEL FOR FEEDBACK OR PROBLEM REPORTING

Problem: At the time of conversion, the only channel for feedback or problem reporting was the 3-person IT Helpdesk, which at the start of school is usually handling resetting of passwords, equipment failures and network connections. There was no other support team in place besides a small instructional technology team that spent most of their time out at school sites continuing to train teachers along with some problem-solving. As a result, hundreds of emails and phone calls every day spilled over from the Helpdesk to the CTO to handle – a completely ineffective and inefficient process. Without a team of TSA's or other support staff prepared to handle the questions from the conversion to a new system (especially when few in the district had any training in it), task prioritization and feedback was unresponsive and ineffective.

Response: The creation of the ATLAS Strike Force Team provided not only the staffing to respond, but also the processes and systems to focus the feedback and problem reporting to a team designed and structured to handle it. This included a new ATLAS Support System that clearly distinguished between bug fixes and

feature requests that helped prioritize work and controlled the noise level. A Teacher Advisory Committee was also created and staffed by the head of the teachers' union that met on a biweekly basis to provide feedback and input. The Advisory Committee assisted in providing a valuable voice for the priorities of the classroom as well as information back to the teachers about the work of the ATLAS Team.

7 PARENT PORTAL WAS LIMITED TO ONE SCHOOL FOR THE FIRST 8 MONTHS

Problem: The previous SIS provided parent access to student grades for several years, but at conversion time, ATLAS did not have a parent access portal. A Parent Portal was created during the first month of school and opened up for one high school, but was not expanded. Parent requests for a parent portal at other schools grew rapidly along with increased frustration by parents at not knowing what the grades were. At the end of January, the local newspaper picked up the story that parents didn't have access to their students' grades and the first of two negative stories about the conversion became public.

Response: In April 2011, after the first major ATLAS release was deployed by the new ATLAS team and confidence in ATLAS was beginning to be restored, the Parent Portal was opened at more schools and at all schools at the beginning of the next school year.

8 THERE WAS COMPETITION FOR RESOURCES FROM OTHER IT PROJECTS

Problem: In addition to spending too much time doing use case interviews which shortened the time for the development of ATLAS, there were also several major IT projects competing for resources. The primary one was the conversion to a new HR/Payroll system in February of 2010. The implementation of this critical enterprise system and the wrap up after the conversion required tremendous resources from HR, Fiscal and IT which limited the time spent on ATLAS prior to release in Aug 2010. Several of these resources were scheduled to work on the ATLAS development, but were unable to join the development team until early summer. Secondly, 1,300 laptops were delivered to teachers who had computers that were too old to run ATLAS during the summer of 2010, which took from the already limited training resources to help teachers with their new computers. Finally, the existing system that did Internet content filtering for the district began to fail during the Spring of 2010 and required a move to a new and more robust Internet content filtering system during the summer of 2010. It not only took valuable resources away from ATLAS, it wasn't configured to handle the wide variety of computers and devices the district had and caused hundreds of teachers and leaders to be unable to access the network and ATLAS during the first few weeks of school.

Response: When undertaking an SIS conversion that affects nearly everyone in the district, it's critical to make sure the necessary resources will be available, even if it requires delaying the start of the conversion. Although 1,300 new computers were provided to teachers who had the oldest devices helped, there were still too many teachers with old computers that had trouble running ATLAS. Every project, large and small must be closely examined – even projects like an Internet content filter replacement project that appeared to not be related. It would have been better to delay the Internet content filter project until after school had started and risk occaisional failure of existing one than to have the new filter actually prevent access to ATLAS for so many teachers and leaders.

9 MICROSOFT CONSULTING SERVICES' APPROACH TO THE PROJECT

Problem: Microsoft Consulting Services had never tackled building a student information system (SIS). Instead of using the existing SIS system as a baseline for specification, it recommended a "start from

scratch" approach and began interviewing teachers and administrators to build a library of use cases to build ATLAS. While this approach had worked well for smaller projects or in situations where there was no existing model, it consumed 5 months of valuable time. In addition, the Fresno Unified development team was not familiar with this approach and they were also not used to doing co-development with anyone else. As a result, this approach to the project delayed the start of coding several months in a short 14 month timeline, which then resulted in a significant reduction on the scope that would be completed. However, in the spring of 2010 there was still strong confidence by the Microsoft project manager and the Fresno Unified development manager that ATLAS would be finished in time and ready for conversion. But by early summer, it became obvious that scope reduction was too severe and that numerous components necessary for conversion would not be ready.

Response: Although the original discussions with Microsoft began 19 months prior to conversion, the approval by both the district and Microsoft took several months and the actual project didn't start until 14 months prior to conversion, which was too short to accomplish what was necessary. Looking back, it would have been wiser to delay conversion by one year at that point. This has been done with a couple of other large projects at Fresno Unified with positive results. In addition, the "start from scratch" approach should have been discarded and the existing SIS, with all of its screens and features, should have been utilized as a base specification. Additional input from teachers and leaders, beyond the specs of the existing system should have been solicited during the early stages of design, instead of waiting until all input and interviews were completed before starting the design and coding phases.

10 PERFORMANCE TESTING AND MONITORING WERE IMPLEMENTED LATE

Although high-load performance testing was done prior to conversion and caught key database inquiries that were fixed, it was done so late in the development cycle that there was not time to test other areas of the code. In addition, key server performance monitoring tools were not in place initially, including Sharepoint Studio, SQL Monitoring and Splunk for exception message correlation and tracking. As a result the team was initially blind to performance issues that were impacting users.

11 EXPECTATIONS FOR A MASSIVE CONVERSION WERE NOT SET CORRECTLY

Problem: The expectations were set during the year leading up to the conversion that ATLAS would be substantially better than the existing system from the first day on. New features were touted, efficiencies were identified and speed and accuracy were foundational. However, even with the best conversions, these types of advantages from a new system are rarely realized the first few weeks after conversion. Creating an upbeat expectation around the conversion is counterproductive and serves only to make the problems seem that much worse. The challenge of such a large conversion, the district-wide deep training required of the new system and the impact it would have on the schools and classroom were significantly underestimated and resulted in the expectations that it could be pulled off without the time, resources and process that were necessary for success.

Response: In December, a "reset" of the project was declared including an apology from the Superintendent for the negative impact ATLAS had on the district. A new team was announced that would shoulder the responsibility of bringing ATLAS up to the expectations that had been set. This reset provided the time necessary to shore up ATLAS, define the processes that had been left out and provide the resources necessary to wrap up the conversion. The ATLAS Strike Force Team did its work well and 9 months after its creation, a new school year was opened with a new version of ATLAS and the processes, resources and support necessary for its success.