

San Diego Unified School District

I21 Infrastructure Subcommittee

February 5, 2014

In attendance: Toren Allen, Eric Bentel, Nitesh Bondale, Bruce Braciszewski, Mickey Brown, Steve Clemons (tele), Dan Cookson, Sharon Curtis, Jim Day, Art Hanby, Tom Kelly, Eric Larkin, Evan Leslie (tele), Daniel Martinez, Jeremy Recktenwald, Matt Spathas, Vance Tester, Paul Villigan (tele).

Jeremy: Welcome everyone. What Toren and I put together is a quick review and possible report out. What we missed last time was presentations on the enterprise side.

Matt: I've been at several of the subcommittee meetings; fascinating, conversations really ranging and unusual. Second part of what I'm hearing is really struggling with what is next and what it looks like, also white boarding what it looks like. Someone from Qualcomm said there's nowhere to work after they drop off kids; how about access to visitors on sites? At the broadband committee, the range of conversations truly remarkable. Midpoint coming up February 10; ponder in this conversation; format is report out from each subcommittee. Get better versed with cross-pollination from all groups. One on today is really thinking about what output we want for February 10 meeting. Also taking stab at what that could look like. Don't know how much time we may spend on challenges and other issues. Great framework.

Jeremy: At this point, we have a brief overview.

Toren: For those of you on the phone, if you are able to, on the invite there is a link to join our PowerPoint. We'll put it on the site also. Focus on enterprise system and systems we've put together over last 2 or 3 years. Back in 2011 we put together 5 year enterprise software plan; took 6 months to implement. Primarily consisted of replacing SIS, major upgrades to PeopleSoft, upgrade and deploying new dashboards within it, refreshing administrative computers at school sites and central office, and training. If you can't see the presentation there is also a url to the plan.

Starting with student info systems, Zangle went out of business. Caused obvious concerns. We went thru a full long process for RFI and RFP; those processes recommended Pearson. Started implementation in 2012; went live in 2013. Lot of work to be done. Continuous updates and improvements in progress. Parent and student portals up and running; very important piece for our community.

Matt: Power School has cloud solution. District has customizations. Makes challenge. Another cycle in SIS thing is being able to register students online; being able to access information real time. What's the vision in where you're headed in SIS? What's the end zone?

Toren: Providing access to parents and students; parent gets info on how to register – one account – for enrollment, working right now on new enrollment form for incoming to neighborhood school; can register online; will advise of need of proof of residency. Data flows to queue so school site can review proof of residency, then enter into Power School. Doing same thing with school of choice; same system, but different process due to lottery, etc

Art: Will those types of self service screens be bilingual?

Toren: New enrollment form and school of choice? Yes

Art: Supporting 4 languages?

Toren: At least 2 now; others will come later.

Jumping into PeopleSoft a bit; we were on version 8.9 end of life; approved by Board in 2012; started in October; 4 phases; more detail in a moment; will be complete June or July 2014. Closing in on full upgrades of PeopleSoft.

This is timeline for PeopleSoft. Went from 8.9 to 9.1 with HR; Finance started up right off in May; 9.2 for Finance in December. The reason we didn't go with 9.1 is that it was about to go into extended support and we would have had to upgrade almost immediately. It had some bugs.

Art: Oracle puts their public sector upgrades in their .2 version; private sector version first. Functionality was imbedded in .2

Toren: Currently starting HR upgrade from 9.1 to 9.2. Did technical upgrade; going live June 2014. With PeopleSoft upgrades, bringing forth enhancements such as absence management; teachers, staff to submit leave requests electronically. If they submit electronically, we approve thru Workflow and it's good to go.

Thought it was important to show this slide. Oracle's spent a lot of research and development over the last several years. 4 or 5 years from now there was talk about PeopleSoft going away. You can see with this Roadmap we're into PeopleSoft for years to come. Oracle purchased PeopleSoft almost the minute we purchased it. Long track record. Lots of customers. One of their new approaches with upgrades is you don't have to take whole upgrade – you can take release pack and pick and choose what you want to install. You can do partial dot release; spread out upgrade over multiple years.

Eric: Does that create a fragmented problem?

Toren: You bring down the entire feature pack, you can pick and choose what you want. Tools updates – still dependency on that. Functionality stays the same

Art: We get quarterly upgrades. From customer point, there are enhancements and improvements to system. Lot of times, A drives B and B drives A. It never stops. That's a good thing because it's constantly getting better.

Eric: Failsafe in place?

Toren: We take a full backup so at least we can do work that morning if something goes wrong.

Matt: is part of your Roadmap – when I see upgrades, packages, tools, are there cloud-based solutions? Software model versus cloud model, using this example. Don't know about SIS; maybe same.

Toren: As far as upgrades...Steve, are you there?

Steve : Depends on maturity of software. Workday wasn't flexible enough for public sector. From that perspective, I think we'll see more cloud-based solutions. We host in data center offsite. We have to have remote access; had to be web based. We don't host in our own data center.

Jeremy: We currently operate in mixed environment. Where it makes sense budgetary to move to cloud, we do. Private cloud for our customers. Same with PeopleSoft implementation; still accessible

Steve: When we did RFP, we put it out for hosted solution; we negotiated work offsite. SDUSD has more experience with PeopleSoft. Included in one RFP was cost effectiveness.

Toren: Do you have developers that maintain the product?

Steve: We trained our people in People Tools. Just implemented 9 districts with financials. Learning curve for everyone at this point.

Toren: With SIS, we evaluated cost effectiveness of hosting offsite. Less to have installed locally, but we pay Pearson to do it.

Steve: When we started looking at SIS as well, it was a weird market; all needed customization. We chose to host it here; made it more effective for us.

Jeremy: With SIS, how secure is student data? We can pretty much show when we support it in our own network, the steps we take to make it secure. Still some maturity to be had out there.

Steve: When we look at all these systems schools are running, student data is everywhere. In some ways we're at a crossroads where we need to put our arms

around it. Some groups are out there saying you don't run the data. Google claims application for ...

Matt: Student information all over the place; high level of infrastructure all over the place; at school levels, building their own solutions at the edge. Part of what could come out of this is standard issue with access rights. Just picking up strands of data being at different levels. On SIS, there are cloud based systems like Luminate. Maybe even a report out could be beneficial.

Steve: Illuminate has done fantastic job. About 6 months ago, lost lots of student information. We put SLAs in place, very strict, performance issue. I'm big cloud-based...school sites setting up Google sites, teachers having students set up Google accounts...

Attendee: In those environments there's going to be customization. Taking back to SDCOE, all ties to what they are doing, up to state. Magic switch would be great.

Toren: Oracle business intelligence initiative...part of 5 year software plan. Wrapping it up now. 2 are PeopleSoft and Zangle; timed perfectly. Purchased and deployed in 2009; focused on attendance. Data in the warehouse; we have zonar on our buses; students will be issued card with reader; database will show where kid got on and off bus; school site will see dashboard.

Here's visual of how architecture works...

Matt: Are you going to talk about business applications, student information systems – I'm looking at student analytics – how far out to the edge are we talking?

Toren: Analytics can mean a lot of things. Vendor we use is Evirge; student performance analytics; we can expand out. I can give you some of the high level stuff

Matt: Is it more around attendance, where I live and other stuff?

Toren: We're meeting with Superintendent to get her vision; marry it with financials and staff attendance; i.e. teacher is out, class is suffering.

Eric : So dashboard is what you use.

Toren: For instance we pull data from Illuminate for assessments, ELA. How do they want to slice and dice data? Give us a plan and we'll make it happen. We are capturing data to do analysis you're referring to. Now we need to build it out.

Here's the phases we've gone thru. First was getting onto 11g of business enterprise; went live in 2010. Phase 2 was getting reports. Instead of paying vendor to produce reports, we built it in here. Custom extract is going from Zangle to PowerSchool. Business enterprise solutions is bringing in HR data we need. They don't really know

what you can do, so we build it and see how it goes. Our CFO is really into business enterprise solutions and how it can benefit school sites.

Toren: We want to do marketing for district; not drilling down to kid or classroom, showing overall situation. When we went to 9.2 PeopleSoft we had to do financial upgrade and make it work with warehouse. I can show you a quick look .

Art: 2 slides talked about Exceed; going to end of life; district going into RFI; wrote RFP; received proposals; evaluation process to make recommendation; will be rolled into program in 12 months.

Toren: Let's quickly go thru some of this stuff. This is our testing environment; shows detail of how much we spend in different areas. Here's some staffing information; decline over years; tough times; how staff has shifted in last 5 years; percentage wise isn't much; attendance information, school by school, month by month, rank up or down, competition between school sites.

Art: How current is this data?

Toren: Updated every night. Attendance daily.

Attendee: How far back?

Toren: 3 year picture; we'll store later. All that data is moving over from warehouse.

Matt: Is that pulling assessment data?

Toren: Not right now.

Matt: I see where you're headed now, in terms of business enterprise.

Toren: This is our district map, broken out so we can only show high schools, biggest enrollment down to smallest enrollment. If we presented map on our website, parent could click and display.

Matt: We did that for Point Loma; about 20 metrics we identified; some were invented; some were standard; mapping idea for info and visualization is really good.

Toren: Right now we're on Schoolwires; it will be seamless in business enterprise solution. I can show you what principal dashboard will look like.

Matt: Last meeting we talked about the plumbing, basically; now you're talking about the software. If we draw a circle and the circle is the core; business enterprise is smart pipe and infrastructure is dumb pipe. Out here to the student and to the student home. Where we're good, and where we have challenges. At the end of the day, we need to get it out to the edge and we need to be able to support it. What I gleaned from you

Jeremy is that we have pretty good plumbing going out to school. Plumbing inside school is good but aging; needs switches and stuff. The other thing out at school site is devices. Further out from there, the harder everything is to support. Where is edge? What needs to work? Is broadband good enough, and they should just go to the library after school? When we talk about infrastructure, smart pipe and dumb pipe, where do we want to be? What's that whole infrastructure look like? We don't want to lose sight of the support model.

Jeremy: Support aspect should definitely be looked at. Where support starts and ends is discussion. Right now edge is our school site. Resources are needed to make sure all works 24/7. Like wireless has shifted dramatically.

Eric: From Qualcomm we are always looking at mobile solution; always looking at supporting students.

Attendee: Is there any doubt the edge is home?

Jeremy: By and large, everyone agrees.

Eric: At some point, the ability to learn 24 hours a day. The more we send it out, the more it works.

Bruce: If you look at Julie Evans' research, last year 80% of high school students had internet enabled phones.

Matt: Digital Tools and Policies committee is talking about bring your own device; multiple platforms. Now it becomes a resource sort of thing. Somebody mentioned that for \$7 million broadband could go to everyone's home. May not be best solution because of mobile devices. One thing is certain – district is on mission to hand out device to every student. I'm gleaning from everyone that every student is going to have a device.

Art: what are they saying about books to web?

Matt: Some angst to that; more PD. Curriculum will be eventually web based. Assessment web based. How is student doing? It's going to be like that, reaching those kids at home. It's not just Promethean classroom; it's every classroom. How is district reaching out to business community? You mentioned PR for district. From economic development standpoint, is Chamber of Commerce involved? If you're giving every student a device and it's working for study at home, you can get the business community involved and from economic development standpoint, the sky's the limit. We are very unique, compared to other parts of country. Big issue is support. If student working on term paper and they lose data, whose fault is that? Even if you're on campus and battery wasn't charged, whose fault? Harlan said at attendance they check battery levels: brains and batteries, and there's consequences. We haven't gotten out to here, but every student has support. We took angst off parents with insurance for

loss or breakage but we haven't solved all their concerns. Everything is cloud based. They don't have it all figured out. I'm not suggesting that. Plumbing has to work;

Jeremy: We partnered with CTE; gave students power to reimage devices at their own site. Student says my computer doesn't boot today; right away someone helps them. Either I have 200 techs instead of 20, or we solve support right back at school site.

Matt: 200 schools, right?

Jeremy: Right. Right now we have one tech for over 5700 devices.

Matt: As we get farther out, that might work here, but not designed to go out to here. We have to put out what that looks like

Jeremy: Support is an underlying theme that has to be addressed. We can talk a long time about how that would work.

Matt: There will be some take aways; like your one tech for 5700 devices; part of phase 2 would be to take high level concepts and push it out. I'm curious from County's perspective.

Bruce: Also other dimension to support students in other ways.

Attendee: You're right. You put out all the fancy stuff, but it's the pedagogy about putting technology into the classroom.

Jeremy: The perfect storm to make sure this will happen is when the school is ready, teachers are trained, principal is on board, and community is engaged. That's what we did with those 10 LOGO schools. All of those things have to happen to make it successful.

Attendee: Parents are huge piece to this puzzle. If you get their buy-in, the people who voted for this bond initiative, training those parents with internet safety, what kids should be doing at home.

Matt: PD and community outreach are other take aways.

Attendee: Hope committee is looking at options to use bond money over time for sustainability. It's a good idea; broadband tied into infrastructure into...all can get rolled into financial bundle...stretch dollars out over long period of time.

Jeremy: Close to 5 years; let's go over what I documented and synopsise. Tried to come up with paragraph of what generally happened; first meeting was LAN and WAN; have good model but have some things to look out for. Just starting point for conversation. About 7 bullet points here. One that's not on here is fiber plant and

schools' needs in the future. Need to update schools' fiber plant. Should make plans to upgrade through all sites. Those of us who update construction plans, internally I'm working on this with Evan and his staff. Challenges are impacts to budget to be determined.

For those of you not too familiar with internal wireless, we are quickly surpassing point of 1 gig connection. Access point is actually going to be able to transmit. Current model we need to shift to for axis point is to pull 2 cables. That ties into last 2; finish our campus wireless installation and replace existing axis points. Thru Prop S, all schools were scheduled to have all modernization – could be 5+ years away. Axis point we tested when rollout started 5 years was cutting edge. A good endeavor would be look at replacing those axis points. Providing some type of guest or visitor network that includes parking lot, playground. Is there a space in that new model for me to just sit down and work for an hour or two after I drop off my kid? Addressing need to have wireless in auditorium this weekend, if a school site requests; we wouldn't need to get involved. We are becoming a service provider more and more every day.

Not typed in here – need to address with Prop Z – we have aging school phones that sites have to fund and maintain. For e-rate schools, we were able to replace phones. As part of a strike settlement, we must have phone in every classroom. In about 100 of our schools, we have phones installed between 1978 and 1980. In district's best interest to address; 15 year old phone systems die every year; it's always an emergency, to get them replaced.

Just a starting point; open for discussion. Anything I missed? Any big theme from last meeting?

Jim: How do we address security and access?

Attendee on phone: Besides security, policy is very important. How will you deal with not getting enough bandwidth? Like what about parent that comes to school? Visiting teacher that goes school to school?

Jeremy: We've been fortunate..when we talk about flexibility, do we have ability to classify, then prioritize it? Have we done that in recent past? No.

Attendee on phone: Generally we buy infrastructure and networks, really competing with bandwidth and security; potential race condition; control close to end point. Example how risks like these can relate – LA Unified as they went thru their process – they get a lot of e-rate funding; can't get bandwidth. If tidal wave is too big, they can at least...

Jeremy: Our latest go around with common core and testing pushing devices to be on and used more than they have...lot of school districts behind 8 ball...do we have enough bandwidth to do testing? Made sure internally we had a process we tested. If we need more bandwidth, we tested we can get it to the Board and get vendor to turn it

up. Now we can easily say within a short window we can get a document to the Board to increase the bandwidth to address that need

Matt: So Jeremy we have 15 minutes left. What I heard is there is policy embedded. I'm a buckets guy. Envisioning our report out, you have recommendations and solutions. 5 or 6 high level key points including policy, security and where is the edge. Capture high level; pull bullet points below each one of those; might be good report out. What does that sound like? Infrastructure: security, policy, scalability, flexibility, support. Where is edge? How far out? Intelligence. Class of service. Prioritization.

Daniel: Parents coming in with devices are lowest priority.

Jim: Financial programs would be priorities.

Jeremy: Our policy is that if you're surfing the web, you're low priority.

Matt: Standardization is huge one.

Eric: Mobility.

Matt: Related to "the edge"?

Jeremy: Defining the edge.

Attendee on phone: With such a large number of devices, need new forms of ID and understand identity; who is this person, what device do they have?

Jeremy: I lump that into security; falls under security; then effect some policy.

Attendee on phone: Is the word you're looking for, uniformity?

Matt: How do we capture this?

Attendee: I was thinking of standards as in different school sites. What types of standards? Bandwidth? Does it go beyond the school to the home? Standards could fall under different categories.

Matt: Standards, uniformity, devices, data.

Attendee: Uniformity could be every kid will get a device.

Matt: Does this capture the universe? If we massage this in some sort of context, does this pull out and promote the conversation in a way to drill down?

Attendee: Add to list; how much will be cloud based versus software based?

Matt: Does that cover where does the data sit? At school level. Does this fit into business intelligence space?

Eric: Cloud is typically a scalability discussion; storing and accessing data.

Matt – Cloud up there with support; spend some time massaging these things and looking thru the conversations; would that capture it?

Art: Teachers doing their own thing with Google apps; where does that fit?

Attendee: Teachers creating space outside of district server.

Matt: At e3 there's a void there where school is responsible; putting student work on cloud; student creates themselves; we set up Google app for education for every student; not standard at district yet; could be as a result of these conversations. You guys are providing all services for teachers; some for the students.

Jeremy: Learning Management System cloud-based; interface around Facebook; gets class webpage, assignment; they're used to it. Some school districts like Moodle; My Big Campus.

Matt: These conversations are happening among teachers all over the district; if site is blocked, they just create a hotspot and go wherever they want;

Attendee: Trying to scale down final report, doing higher level is important; I don't know about scaling down; infrastructure committee is vital to other committees.

Matt: Do you think we've covered it?

Attendee: Throwing that out to you, as chair of the ad hoc; if infrastructure isn't there, other committees are shot for report back to Superintendent and Board.

Matt: Taking out semantics and getting into semi-normal terms; I hear you. One of the reasons these committees were selected...don't want to lose any of them...vision and policy and 21st Century. We're way past time.

Bruce: What is learning experience, wherever the edge is?

Attendee: Vendors will come in and present technologies. What is end game from educational goal?

Attendee: I was part of 5 year i21 from beginning. If it ain't broke don't fix it. The economic impact of the data the district is acquiring is that attendance is up, dropouts are down. Pedagogy is working with this technology. Devices in kids' hands. Using technology every day. How do we take that out? SDUSD was nominated for a very

prestigious award; probably will get it next year. Seeing things already with what Prop S has done. Marten is joining with business community and providers. Carrying forward.

Attendee: We don't want to just throw up on you, all of our technology.

Attendee: Sitting in on other committees – none of those other subcommittees – starts with support, then going out to wireless access points; caller talked about floods of content that is valuable to students; don't want to choke that out. What's going on in classroom is exceptional. With technology rich environment .

Mickey: Just recently assigned to EdTech; been to Dana, Wilson. Working with i21 has made me proud to work for this district. From teacher perspective and 3.9 GPA, I think I'm qualified to do a really good job without someone standing in front of me telling me how to do a good job. Oh really, there's a cool tool and you're going to give me training and then give me support? It was profound and had effect . As for citizenship, I also saw that as part of leadership. As a digital teacher leader responsible for coming here once a month and taking back what's new to their site. When I go to conventions and talk to other people, I am always proud because we do such amazing things.

Attendee: Put that kind of message on tape; that's your midpoint report out.

Matt: I don't think anybody has the secret sauce. It's okay to fall asleep in the back of the class, but not interrupt anyone and that's okay. e3 meets once a day, before school, to talk about how fast things are changing. Some schools are a lot more ready.

Mickey: We're talking about Dana; they started before i21. Even in my time speaking to teachers, it's a 3-5 year learning curve to implement . We're asking people to implement i21 technology when maybe they're only comfortable with checking their email. Their classroom will look different. Nobody will be able to come into classroom and do what I was doing without training and support and passion helps.

Eric: When internet came online, you had to dial in. Role of technology is to make it easier to use; form follows function. To your point, there's technology; most people don't know about developing technology; there are new gigabit Ethernet wireless devices. How do you get schools where teachers can teach, administrators can manage? We could be helpful, too, if we know what it is we are trying to solve.

Jeremy: We do plenty of RFIs. Keeping abreast of technology is the job of my boss, and me. We all have different ways of doing things

Eric: we showed iPad to Los Angeles Unified; companies like Microsoft and Apple want to show you. When I was working with other vendors, I worked with Steve Clemons a lot because I wanted his feedback. Apple was close to Los Angeles Unified School District. Different than vendor showing up and throwing up on you.

Vance (phone): Let's sum it up by saying Qualcomm could serve as a trusted advisor, keeping education at the forefront.

Matt: Thank you for your comments. This is really complicated sticky stuff. We'll gather this conversation, get input, get draft out to you before midpoint. Thank you for coming tonight.

Meeting concluded at 5:52pm.