



Excerpt 2: CHARLIE INTERVIEWS JIM SCOTT, PUNAHOU PRESIDENT

Charlie Isaacs, LEED AP, is our PE on the Punahou K-1 job. On March 20, 2009, Charlie interviewed Punahou School's President Jim Scott about Punahou's vision and commitment to sustainable living and green building on campus. This the second abridged excerpt.

CHARLIE: Dr. Scott, how over the long term, over the life of Punahou's stainable strategic plan, how are you measuring your success?

JIM SCOTT: Well, some can be measured quantitatively like energy use, water use, and the amount of waste we are throwing away...the number of cars on campus. Regarding a specific benchmark, we wanted to reduce our energy and water usage and our solid waste by 50% by 2016. The other thing that can be measured, we think, is the behavior of students, faculty and staff within the organization. I think you can do that through surveys, through observations. The kids hold our feet to the fire. These are students who are all over this. It is not something that they need a mandate from the President's Office to go out and do. They are enthusiastic about this. So the measurement has been easy.

CHARLIE: What about your curriculum? Have you incorporated any of this into your actual curriculum?

JIM SCOTT: I think that has been more of a challenge, but it is not because there is not a lot of enthusiasm and passion around it. We did not want to just legislate and mandate that we incorporate sustainability into our curriculum. We want people to become inspired and to bring it into the curriculum. Every grade level has a class or two that is leading the way in environmental sustainability. The science teachers have taken this on as school-wide project. We have a sustainability fair coming up in mid-April which is campus-wide...it's essentially faculty and students sharing

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what they are doing in different areas of school. So you know at Punahou we don't legislate curriculum like the DOE or some other private



schools...we have it bubble up. So what we can do is put out some philosophical and aspirational challenges like the 2016 goals.

CHARLIE: Let's talk about the universal picture, the global picture. What role do you see Punahou having, if any? Can Punahou go beyond the shores of Hawaii?

JIM SCOTT: Sure, but I think it's not just Punahou. I think there's an island intelligence that I believe is very much working here in Hawaii. Because we live on an island, our students and our citizens can see how fragile this island ecosystem is, and because of that fragility, there is a vulnerability they can see. They can see changes happening faster...or see the environmental threats faster, there's a greater sense of urgency and so that urgency moves them to action faster. So maybe that's why our kids are all over this. They understand how fragile it is.

We've become more intentional about being here in Hawaii, about what it means to be Hawaiian. The school was founded by Congregationalist missionaries in 1840 but the lands were given by the Hawaiian chiefs in 1820. So what I tell the kids is that the history of the school has two lineages...one, missionary and the other is Hawaiian. So we have looked for definitions of sustainability from the ancient Hawaiians. Punahou is part of an ahupua'a from Manoa Stream to the Ala Wai Harbor. The Hawaiians used to take care of that water because whatever

happened upstream affected downstream... So that sense of interdependence, that sense of social obligation, that sense of taking what you need so you can leave plenty for others... and not just for now but for future times.

CHARLIE: That's excellent. I am going to ask you about LEED, but not in a technical way, more of a philosophical way. Have you developed a feeling for LEED?

JIM SCOTT: Well, regarding our Case Middle School buildings that were LEED Gold certified, we recouped our costs by year Year 4. We can prove and document this. We have been able to save money. Regarding K-1, we have our 5 and 6 year olds in Kindergarten and First Grade, our youngest learners, and we have the potential to impact their attitudes and behavior forever. We also have the potential to teach the older ones. And so we want the outdoors to become a median for teaching. So beginning with the way you guys are doing the site now, there is all the LEED certification related to removal material, replacement of stuff, you want to tell that story to the kids. Because that's what we didn't do in the Middle School, but now we want to be able to show them why we are doing this, why are they taking that tree out and planting it back over there. Why are they recycling materials a certain way?

Few of us grow up ever really seeing a complete eco-system, so we are trying to develop that with water, wind and sun right there in the K-1 building



with a windmill, a bioswale, a water catchment, where 60% of the energy will be provided by photo-voltaic. I'd like to figure out a way to do it 100%. We are going to keep at this. And every year we need to teach the Kindergarteners what that is. So again, the outside becomes a median for teaching. Energy independence... if we can say this part of the campus is going to be supported separately that would be extraordinary. When we built the Middle School, only one of the buildings, Lanai, had photo-voltaics. At that time, we just couldn't afford to do everything, but we are going to put as much PV as we can into this.

Back to K-1.... essentially we turn over the land to you to build it. Legally, we have a contract and you have responsibilities, etc... but in the Hawaiian way, we are essentially trusting the land to you... we invite you on to the campus and you are not just building a building... you become educators, teachers... it's a blessing, it's a noble thing to build a school. And who knows, one of these kids might become President some day....

CHARLIE: Ha! Ha!

JIM SCOTT: So you want these types of kids to read that banner above Wilcox Hall that says "K-1: A Place of Wonder." I wonder why they did it this way. Because someday they're going to be in a position to influence a decision...that's what I mean. They are going to say "Hey, someone else showed me the way, it's my turn now."

CHARLIE: Excellent, excellent Dr. Scott. Thank

you for this opportunity.

QWIK FACTS

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FROM THE 3D TRENCHES...An article by HDCC's Chris Baze, CCCA, LEED AP

BIM, LEED and IPD

Building Information Modeling, Leadership in Energy and Environmental Design, and Integrated Project Delivery are the three hottest buzz words in the AEC industry today. Used together, these new ideas can dramatically increase efficiency in both the process of design and in the building itself.

Building Information Modeling

By now, everyone has heard of BIM and its benefits. Beyond being three dimensional, a building information model can incorporate time and cost data. The other word that always gets brought up is parametric. This means that design rules are programmed into the model instead of manually drawn instance by instance. Take a window for example; a manufacturer may be able to produce any custom size or color of a particular model of window. But we know that no matter



the size or color, the frame assembly will remain the same. In traditional drafting, each window size would be drawn out, and a schedule would be meticulously coordinated to log the size and color of each window. In BIM, the window is only drawn once, and parameters are established to change the size and color to whatever combination you want.

Leadership in Energy and Environmental Design

LEED is an attempt to set a standard of measurement for green buildings. The many of us who have recently taken or are preparing to take the LEED exam are surely familiar with the measurement criteria: selection of a sustainable site, water efficiency, energy consumption and effect on the atmosphere, environmentally responsible materials and resources, indoor temperature, air, and light qualities, and innovation in design. LEED buildings are now becoming the standard in construction rather than the exception, and it is important, in my opinion, to remember that LEED is far from a perfect rating system. We should be striving for green buildings, not just LEED buildings, again in my opinion.

Integrated Project Delivery

IPD is an emerging project delivery method that helps ease the adversarial relationships frequently formed between the architect, contractor, and owner in a design-bid-build project. In Integrated Project Delivery, all parties involved in the project form a team and collaborate from the

very beginning. The idea is that the combined knowledge and experience of the team is most powerful at the beginning of the project, when decisions made have the greatest effect. Disputes do not become claims, but are instead immediately solved by a decision making body which makes decisions in the best interest of the project. Compensation is structured to align individual success with team success through incentives and setting milestones. The project goals and budget are established from inception, and if goals are exceeded, all team members benefit. At the same time, if goals and budgets are not met, then all team members suffer.

Synergy

The three strategies explained above are all limited on their own. When combined, they can produce a truly outstanding building. LEED data such as daylighting, rainwater catchment, natural ventilation, and energy modeling can be produced off of the BIM model with a click of a button when set up properly. IPD with a BIM model eliminates confusion over inconsistent documents and lets all parties quickly extract the data they need. And IPD allows contractors to provide feedback from previous LEED projects that can reduce or eliminate the cost premium typically associated with LEED buildings. Most importantly, time, material, and labor waste are all drastically reduced when a project successfully implements these strategies together. PAU