I²SL Sustainable Lab User Manual Working Group

Tuesday, June 2, 2020

11am – 12pCST

- The meeting reviewed the status of the working group progress, including the updated mission statement, updated status of the subcommittees, and how the current executive committee group was assembled.
- The 6-month look ahead includes bi-weekly conference call worksession with the executive committee, with a target topic each month. September will be spend compiling the information that will be presented at the October 2020 Annual Conference. It's not confirmed, but likely will be hosted virtual.
- After the October 2020 annual conference, the group will start to look at structuring subcommittees and including others in the conversation.
- After review of the status by Christopher, Jacob, Adana and Phil, the call opened to others to introduce themselves and to provide some initial thoughts.

**Intros**

1. Name and Title
2. Institution
3. What can I contribute?
4. What can the industry gain?

- Allen Doyle, occupant’s perspective with researcher experience. Sustainability manager at U California. Greenhouse gases. Let’s involved the occupants and what hazards are they bring in the lab and risk reduction. Team building and continuous improvement.
- Blythe Vogt, recruit other colleagues for MEP, add value in lab planning, lab equipment, as well as building systems. Consider integration of commissioning plan.
- Brad Cochran, CPP. Primary interest in building ventilation interior and exterior. Over the years, operators have been ‘tweaking’ it, not fully understanding the value. BMS system. Link to training resources.
- Dan Doyle, GBA. Systems and planning contribution. Work in existing buildings where cost savings during design are impacted down the road. Energy, water, Life Cycle often get left out of planning process due to budget.
- Sharon Altmann, MRI global senior scientist. BSL1-4. biosafety professional and much work with EHS and with users to understand safe workflow. Policy and user end expertise.
- Dave Swanson, DLR Group arch / lab planner. Turn over the building to a user group that may not understand the nuances and how can we communicate this. calls after occupied for a year when it isn’t functioning, but not using it the way its intended. Systems, planning, assisting the user to understand that flexibility is a holistic approach.
- Tom Smith, 3 Flow, ventilation management program development for institutions. 3,000 hoods tested annually. The complexity of system is outpacing knowledge. Degradation is occurring, need a good management plan = schedule activities and manage the change. Integrate into current tools such as Smart Lab toolkit integration. Smartlabsi2sl.org, manage tab to develop a management plan and reports. Z9.5 standard has requirement for ventilation management plan, including detail and a checklist.
• Steve Webster, lab planning on tenant and developer. An opportunity to create common ground for developer client and tenants to understand what basic building design to support laboratory.
• Group stated preference Monday Afternoon / Tuesday for 90 minute sessions. Invites will be sent out asap for bi-weekly worksession.

Brainstorm
1. How does your idea tie back into our sustainability goals?
2. Who else do we need?
3. How do we accomplish this?
4. Who will champion this portion of the effort?

• JW: How do you roll this out so it is powerful, but also in a form that can be accomplished by people and available by all.
• PW: A user guide, similar to when you purchase a vehicle, something that a team designs project and creates the manual if we give them the format. All parties of the project are involved. Some knowledge of what to expect and not to expect. Gives the boundaries of the performance of the building. This user manual will include information from all project participants - this is the framework to safely use and operate the facility. All users have a common goal of level of sustainability or safety and everyone moves along in the common goal. This is what this facility is meant to do - not just the building but the lab.
• BV: we recognize the client and how much control they have over the occupant. Government and corporate have control over user. Developer have less control but build speculative space. Academic clients have vocal users - grad student lab manager tasked with purchasing equipment and the budget and energy efficient options do not often align. Flexibility and adaptability to expand exhaust points within the limit -- change out research types in a facility and how does the facility accommodate.

Recording of the virtual meeting here: https://web.microsoftstream.com/video/dc667b7d-7e0f-4edf-bd6e-104c9e5e9e94
Sustainable Laboratory User Manual
Steering Committee Intro.
Who we are

Phil Wirdzek
I2SL President / Executive Dir.

Adana Johns
S&T Practice Leader
Perkins and Will
Chicago, IL

I2SL Windy City - President

Christopher Kleingartner
S&T Practice Leader
Perkins and Will
Denver, CO

I2SL Colorado - Board

Jacob Werner
Senior S&T Project Architect
Perkins and Will
Boston, MA

I2SL New England – Sponsor Chair
I2SL New England – Events Chair
Tuesday, June 2, 2020
Webinar Agenda

01 – Progress to date (5 minutes)

02 – 6-month outlook (5 minutes)

03 – Introductions and thoughts (15 minutes)

04 – Open Brainstorm (20 minutes)

05 – Next Steps (10 minutes)
Phil Wirdzek discussed I²SL initiatives at the Perkins and Will Convergence Symposium 2019 in Toronto.
Progress Update

• Inception – Apr 2019
• Concept Launch – Sept 2019
• Conference Feedback – Oct 2019
  • Focused Sustainability Perspective
• Revised Mission Statement – Spring 2020
• Subcommittees Launch – June 2020
The Sustainable Laboratory User Manual working group was launched in October 2019 to create a new tool to enable sustainable laboratory operations. The manual is envisioned as:

- A living document that describes a facility’s purpose, functions, infrastructure, operations and intended uses.
- Containing guidance for owners / operators to enable them to intelligently use, maintain, and renovate the laboratory over time.
- Capturing information about the facilities design and infrastructure, including capabilities, limitations, flexibility / adaptability, sustainability, and resilience.
- Expandable to capture other information as desirable and useful to the facility owner / operator.
- Providing a flexible systems to collect and store common design and construction documents, without duplicating them, including the Owners Project Requirements (OPR), Basis of Design (BOD), construction drawings, specifications, construction submittals, Building Information Models (BIM), Operations Manuals (O&Ms), commissioning reports, Testing and Balancing (TAB) reports, and other closeout documents.
- Made up of systems, processes, and tools that are easy to use, flexible to change over time, open source, and portable to future owners / operators / users.
Subcommittees

1. Laboratory Planning
2. Laboratory Equipment
3. Building Systems
4. Architectural Building Design
5. Policy / Reporting / Other Operational Programs
6. Software Interface / Maintenance
1. Laboratory Planning

• Module concept, dimensions

• Building systems methodology planning notes in coordination with module

• Notable flexibility / adaptability features
2. Laboratory Equipment

- Digital operations manuals, including cut sheets
- Building infrastructure needs to support equipment.
- Equipment examples include Autoclaves, Glass wash, Environmental Rooms, NMR, Mass Spec, etc.
3. Building Systems

- Capacity and design assumptions including redundancy and diversity
- Digital operations manuals, including cut sheets
- Plan for future adaptability
4. Architectural Building Design

• Architectural systems user guide, example is façade technology

• Life Safety strategies and notable features

• Specialty area design, including HPC / data centers, food service, core facilities, etc.

Architectural Building Design Subcommittee
5. Policy / Reporting

- Environmental Health and Safety
- Reporting to national, state, local institutions (i.e. local power company, LEED, etc.)
6. Software Interface / Maintenance

- Confirm extent of use and distribution of content
- Organization of content
- Design interface for dashboard
6-month outlook

**June – September 2020**
- regular bi-weekly scheduled committee meetings (7 meetings)
- regular bi-weekly PW and I2SL coordination meetings (7 meetings)

September – Finalize I2SL Chicago presentation

**October 2020 – I2SL Chicago update**
- Plenary Introduction
- Lunch Session Update
- Happy Hour (hosted at PW Chicago?)

**November 2020**
- 2021 Strategy Sessions – 2 meetings (PW + I2SL) and (Working Group)
- What worked in 2020?
- Goals for 2021
6-month outlook

Two working sessions per month:

1. JUNE / Complete mission statement
2. JULY / Complete format
3. AUG / Complete action plan - 2 years, 5 years, 10 years, beyond
4. SEPT / Compile and present
5. OCT / Conference Time!
Why this group?

- Lab Users – 2
- Architects – 6
- Engineers – 7
- Owner / Operators – 4
- Vendors – 4
- EH&S – 1
30 sec Live Introductions

1. Name & Title
2. Institution
3. What can I contribute?
4. What can the industry gain?
Next Steps

Let’s mobilize, organize and start our charge together.

June 2020
Selection of Committee chairs and forming committees

- Subcommittee meeting(s)
  - Chair meeting(s)
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  - Chair meeting(s)

August 2020
Goal Alignment & Calibration at Annual Conference in Chicago

2020 FSL Annual Conference
Designing a Sustainable Future
October 4-8 • Chicago
Brainstorm

Share your ideas...
How does it tie back into our sustainability goals???
Who else do we need???
How do we accomplish this???
Champions???
Next Steps?