

ESUS

Environmental Stewardship
Utilities & Sustainability
Community

A Community of  IFMA™

**ESUS SAG
Newsletter**

**Dec. 9,
2016**

1. The ESUS Strategic Advisory Group Team + IFMA Board liaison.



Sheila Sheridan



Chris Laughman



Jenny Yeung



Bill Conley



Eric Teicholz, Chair



Dr. Sharon Jaye



John McGee



Board Liaison: Gordo Hicks

1. REMINDER: Wednesday January 11 “IFMA Benefit of the Month” Webinar, 2:00 PM – 2:30 PM Central

Energy Star – Case studies from the City Energy Project and IFMA

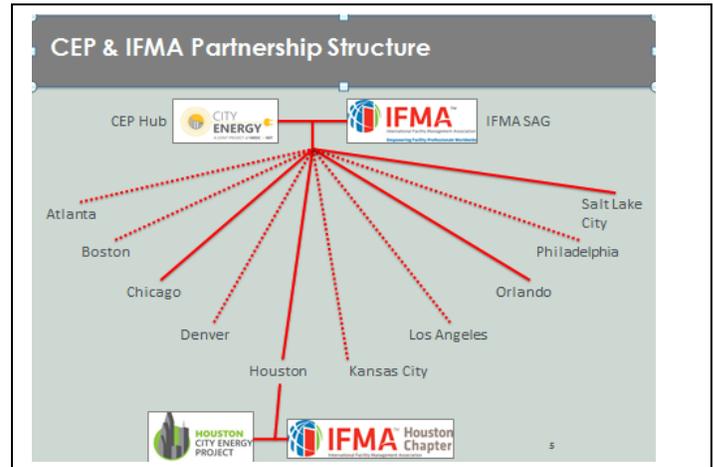
Attendee Link URL: <https://attendee.gotowebinar.com/register/2807330641764924675>

2. CEP Adds New Partnering Cities:

Joining the project today are: Des Moines, Iowa; Fort Collins, Co.; Miami/Dade County, Fla.; New Orleans; Pittsburgh; Providence, R.I.; Reno, Nev.; San Jose; St. Louis; and St. Paul, Minn.

Press release here: <http://bit.ly/2fU9yg4>

See Third Party Liaison activities section of newsletter for a description of current CEP/IFMA activities.



3. How-to Guides:

ESUS is still looking for Subject Matter Experts to update the following Guides: Data Centers, Water, Landscaping, Food Service, Low Cost/No Cost Energy Savings and Commissioning. All guides are located in the Knowledge Library. ESUS has a budget to help defray author costs.

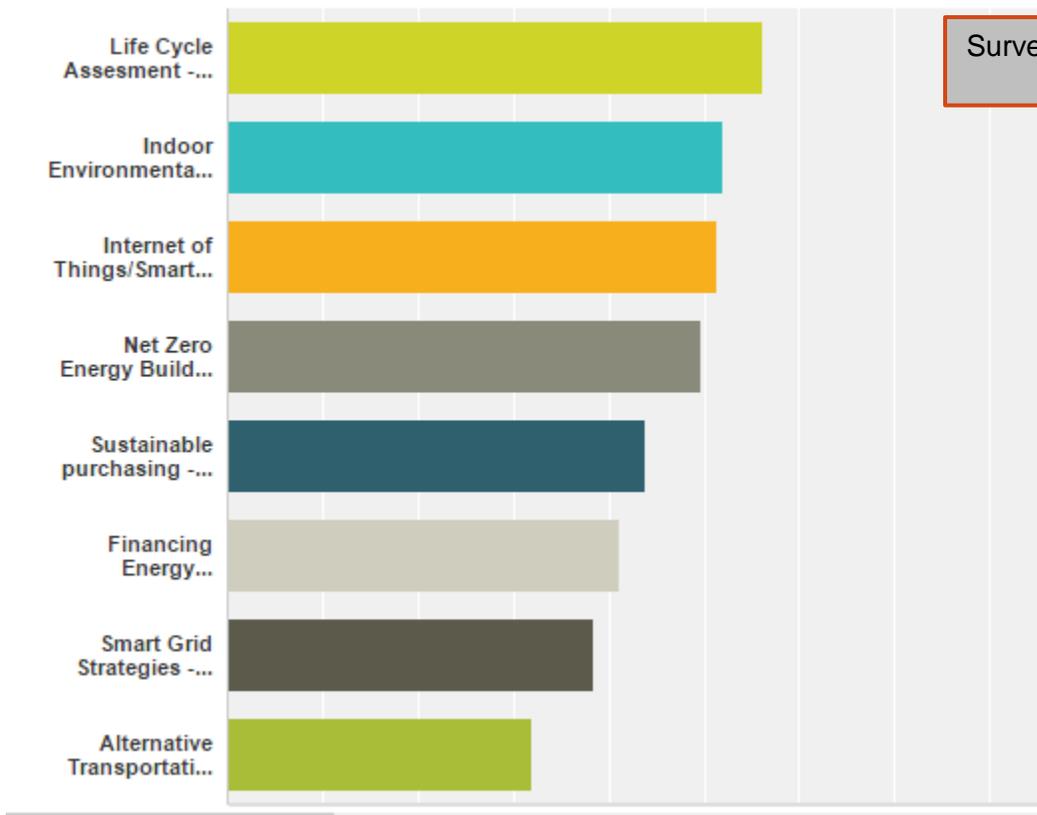
ESUS recently used Survey Monkey to solicit input regarding new potential topics of interest for the How-To Guides. The results of this survey appear below and will be used as a guide to selecting new Guide topics but will also help determine our editorial calendar for our eFMJ articles and webinars. Please let us know if there are other topics of interest that do not appear on this list (send to sustainability@ifma.org and include your e-mail address.

Topics

- Life Cycle Assessment - cradle to grave processes, cradle to cradle, life cycle costing
- Indoor Environmental Quality - occupant comfort, indoor air quality, acoustics, wellness programs, building envelope, active design, pest management
- Internet of Things/Smart Buildings - emerging technologies, building controls, advanced metering, remote monitoring, big data
- Net Zero Energy Building - carbon neutrality strategies, living building challenge
- Sustainable purchasing - supply chain management, local purchasing, sustainable products and materials, consumables
- Financing Energy Investments - ESCO, capital funding, rebates, resilience, green bonds, revolving funds
- Smart Grid Strategies - demand side management, energy storage, smart meters, utilities, distributed energy, renewables
- Alternative Transportation - electric vehicles, route planning, incentives, fleet programs, fuel

Topics Included in the Survey

of respondents: 51

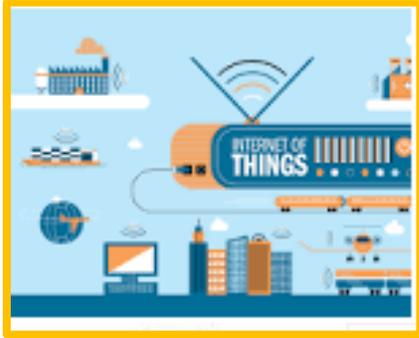


Survey Results

...and the comments that were received from the participants....

A connection between sustainability and operations & maintenance practices as a way to be sustainable.
BREEAM
Building Information Modeling!!!
Collaborative facility management: from hiring to project management, it takes a community of individuals to collectively manage facilities - it's called a team.
corporate asset utilization metrics and the value of knowing if the assets your company acquires actually provide the value you expected to be delivered. corporate asset utilization is an important sustainability metric. it can become the portal of the B2B sharing economy because underutilization leads to unnecessary consumption of precious planetary resources whereas maximization of asset utilization, through sharing or other means, reduces unnecessary consumption and helps us all become better global citizens.
Facilities management department bill for services - so FM low or no cost to organization.
Food waste
Good choices above!
Green Building rating systems
I think it would be worthwhile introducing the idea of the Global Reporting Index for Greenhouse Gas Emissions and the frameworks it provides that allow comparison to peers etc.
Not at the moment. Also on the above they are all relevant and I know the IoT is a really hot topic so it was really hard to rank the 8 items.
Q1 answers get deleted-- you're wasting my time
Renewable Energy
resilience, voice of the tenant (leased space),
retro-commissioning of existing facilities
Selling to the C-Suite
Storm water strategies / ERU management Commissioning, re-commissioning, retro-commissioning
Strategies related to People in the three Ps or Equity in the three Es (Human factors)
Sustainable best practices associated to landscaping and grounds maintenance.
Technology for Sustainability
Tenant participation or representation in creating sustainable city local laws
waste management best practices
Water Reclamation

4. Internet of Things (IoT) Initiative



CoREtech Conference

A report of findings related to the CoREtech conference described in the Nov. ESUS SAG sheet will be posted shortly on the ESUS Community website and the IoT website. For those interested in learning more and joining this initiative, send contact information to sustainability@ifma.org.

4. Welcome to our new November ESUS community members.

Welcome to the sustainability community. We look forward to your involvement in sustainability and ESUS. Please let us know if you have questions or comments or wish to get more involved in our activities.

The IoT Task Force has established a collaborative web site on Slack and is coordinating with IFMA re. potential products of the initiative. Potential areas of investigation include:

1. Security issues
2. I.T. (including information on sensors, smart meters and devices (e.g. cameras, mobile phones), role of big data, role of the cloud, , etc.);
3. Interoperability and standards
4. Sustainability (including information on impact of IoT on lighting, energy management and utilities (i.e. WAGES - (Water, Gas, Electricity and Steam))
5. Asset Management (including various types of maintenance and BAS)
6. Urban IoT Usage (including information on infrastructure, parking, street furniture, security, preventive maintenance, emergency preparedness, Real Estate, people (wellness, behavior, preference and people/asset communication issues))
7. Finance (costs/benefits, potential new FM revenue models by having access to IoT data, rebates)
8. Regulatory/legal issues
9. Case studies of existing applications
10. Semantics: Definitions for FMs: Big Data, IoT, Analytics, Smart Devices, etc.
11. Analytics and business intelligence
12. Commercial products (matrix of URLs of RE/FM, technology products organized by relevant channels)

5. ESUS 2016 Webinar URLs: In case you missed any of our 2016 webinars, they are available at the following URLs:

Jan 21 Sustainable Procurement:

<https://attendee.gotowebinar.com/recording/4973828137377506306>

Feb 17 ENERGY STAR -

<https://attendee.gotowebinar.com/recording/8637296428037464835>

Mar 8 Getting Started

<https://attendee.gotowebinar.com/recording/6074554726479061505>

May 18: Measuring and Reporting

<https://attendee.gotowebinar.com/recording/4662997302282251010>

Jun 22: Waste Stream Management

<https://attendee.gotowebinar.com/recording/2311727970939962628>

Jul 13: Engaging Tenants in Energy Efficiency

<https://attendee.gotowebinar.com/recording/4255201634878825987>

Sep 7: Resilience Planning for Facility

Managers <https://attendee.gotowebinar.com/recording/5824908416393568513>

Nov 8: Energy Storage: Is It Right for Your Building

<https://attendee.gotowebinar.com/recording/288633175935953924>

7. News from our ESUS' Third Party Liaisons

City Energy Project

Planned Joint Activities

1. **IFMA/CEP Webinar on 1/11 @ 3 PM EST.**
2. **SET UP CEP Slack Site:**
3. **EPA/CEP/IFMA Train the trainer webinar.**
4. **Live training at Fusion/WWP**
5. **Look at joint IFMA/CEP voice of the tenant initiative**
6. **Expanded city IFMA/CEP webinar (with new cities)**
7. **Preparation of an integrated IFMA/CEP ENERGY STAR Portfolio database**
8. **Pilot case study report**
9. **eFMJ article**

USGBC



Washington, D.C. — Dec. 2, 2016 – (RealEstateRama) — A new technology company, Arc Skoru Inc., officially launched today by Green Business Certification Inc. (GBCI).

This new venture will be the official host for Arc, a state-of-the-art digital platform available at arcskoru.com. Arc allows any project — whether a single building, a community or an entire city — to measure improvements and benchmark against itself and projects around it.

- Arc is a simple digital platform for all projects pursuing LEED certification and will eventually include other green building rating systems, standards protocols and guidelines.
- Arc is inclusive of all projects, even those not pursuing certification, so that all buildings can measure performance and make incremental improvements.

- Arc facilitates connections to people and projects globally. It encourages innovation, enabling informed decisions on building design, operations and maintenance.

Features of the current Arc platform include:

- Existing buildings can use Arc to earn LEED Operations + Maintenance certification and precertification using the O+M performance path.
- Projects that are currently pursuing and planning to register for the LEED for Existing Buildings standard path can also use Arc for performance data reporting.
- Cities, communities and districts can use Arc to start tracking data and earn LEED pre-certification.
- All registered and previously certified LEED projects have access to Arc to keep their LEED certification up to date. Project leads can also use Arc for performance data tracking and reporting as per the initial requirements in LEED for data sharing.

More info at: <http://www.realestaterama.com/2016/12/02/new-technology-venture-launched-to-facilitate-leed-certification-measure-performance-and-benchmark-green-building-projects-ID038983.html>

DoE:



A bit of fun news coming out of DOE: Better Buildings SWAP Season 2 just came out...featuring the U.S. Naval Academy and U.S. Air Force Academy. Both military operations swap energy teams to improve the energy efficiency of each one's campus.

The [web series](#) covers a two-day swap at each campus. The [teams learn from each other](#) that they can apply simple behavioral changes to help students and faculty be more mindful about lighting usage and plug loads in classrooms when not in use.

[Season 1](#) featured Hilton Hotels and Whole Foods Market.

Sustainable Purchasing Leadership Council (SPLC)

Next "Healthier Procurement Webinar Series is entitled:

[How to Specify and Verify for Human & Environmental Health](#)

December 15, 2016 at 1pm EDT

Registration information is [HERE](#).





SPLC Summit information found at <https://www.sustainablepurchasing.org/summit16/>

11. Global News From Around the World

The ESUS SAG Newsletter will periodically present news from around the world. This second article (in German, attached), by Annette von Hagel, discusses current sustainability work in Germany. For those that do not read German, ESUS' resident German translator, John McGee provided this summary to help guide you through the report.

- 1) Documentation - Information Demand Vs Supply
- 2) Resource Efficiency
 - a) Non-renewable resources for building material (50%)
 - b) Building rubble and waste by dismantling (52%)
 - c) Water consumption (30%)
- 3) Construction Volume in Germany – 2008 to 2014
- 4) Waste Management 2013 in % (and total 386 Million t)
 - a) Other Waste – 15%
 - b) Settlements – 13%
 - c) Building and demolition waste – 52%
 - d) Waste from waste treatment plants – 12%
 - e) Waste from the extraction and treatment of Natural Resources – 8%
- 5) Construction and demolition waste 2012
- 6) Polluting Substances in Germany
 - a) Mineral building materials 10.5 billion t
 - b) Wood 220 million t
 - c) Metal 100 Mio. t
 - d) Copper in electricity network 3 Mio. T
- 7) Sand Rock - 2016
 - a) Germany 2014
 - i. 240 million tonnes of building land and gravel
 - ii. 10.4 million tonnes of quartz sand and
 - iii. Gravel 211 million tonnes of broken natural stones
 - iv. 80% of the total production of mineral raw materials for public contracts
 - v. Demand in Germany 5.77 t / a per person and consumption tendency is rising
- 8) Sand – Recycling
 - a) The main share comes from the construction industry
 - b) Recycling of sand and demolition concrete is currently under investigation

- c) Institute for Processing, Landfill Engineering and Geomechanics at the TU Clausthal is developing a processing procedure that allows not only the recovery of the non-ferrous metal content but also the use of the mineral as a substitute building material
- 9) The Global reserves of raw materials (Eric: in order of size)
- a) Coal - Iron – Natural Gas – Uranium – Oil – Nickel – Copper – Lead – Gold
- 10) Regulations regarding the award of public contracts - Calculation of life cycle costs)
- a) (1)) The contracting authority may provide that the 'Criteria' criterion is calculated on the basis of the life cycle costs of the service.
 - b) (2) The contracting authority ... The calculation method may include:
 - i. The acquisition costs,
 - ii. The cost of use, in particular the consumption of energy and other resources,
 - iii. The maintenance costs,
 - iv. Expenses at the end of the period of use, in particular the collection, disposal or recycling costs, or
 - v. Costs resulting from the external effects of environmental pollution,
 - c) (4) Where a method for calculating life cycle costs has been laid down by a European Union legal act, the contracting authority shall specify this method.
- 11) Building Regulations 07/2013
- a) The CE symbol must be available for all construction products
 - b) The building, its building materials and parts must be recyclable after demolition
 - c) The structure must be permanent
 - d) Environmentally friendly raw materials and secondary building materials must be used for the structure
- 12) EU Communication on the efficient use of resources in the building sector
Main objectives of the initiative
- a) Reduction of environmental impacts over the life cycle of new and renovated buildings, commercial and public use as well as residential buildings
 - b) 5-10% of the total energy consumption for construction products
 - c) Recycling or reuse of building materials / products
 - d) European evaluation system with uniform Indicators
 - e) Research projects and innovation in the field of recycling and production of building materials from construction and demolition waste
- 13) Roadmap for a resource-efficient Europe
Objectives concern all areas of society and the economic system
- a) Gaining resources from resources
 - b) Biodiversity
 - c) Water, air, land and soils, ...
- Build better
- a) High resource efficiency standards apply to the renovation and new construction of buildings and infrastructure.
 - b) Application of the lifecycle concept
 - c) All new buildings are low energy buildings and highly material-efficient
 - d) 70% of non-hazardous building and demolition waste is recycled
- 14) Research and innovation
- 15) Roadmap for a resource-efficient Europe

"The vision: By 2050, the European Union's economy has grown in a way that respects the planet's resource constraints and borders, thereby contributing to a global economic transformation.

Our economy is competitive and inclusive and offers a high standard of living with significantly lower environmental impact.

All resources are sustainably managed, from raw materials to energy, water, air, land and soil. The environmental impacts have been achieved while the biodiversity and ecosystem services they support are protected and valued and essentially restored. "

- 16) EU Directive Sustainability Reporting
 - a) Indication of non-financial and diversity information by certain large companies and groups
 - b) National enactment until 6.12.2016
 - c) Compulsory reporting
 - a) Company > 500 employees in the public interest companies: Banks, financial institutions, insurance companies and companies whose securities are admitted to trading on a regulated market of a Member State
 - b) ~ 6,000 companies (EU)
 - c) Valid from fiscal year 2017
 - d) Disclosure of Data and Information
 - a) Environmental, social and employee concerns
 - b) Respect for human rights and the fight against corruption
 - e) Guidance: German Sustainability Code, UN Global Compact, Standard ISO 26000
- 17) The UN - Member States have set 17 new sustainability targets from 2016 onwards
Study: The sustainable development goals of the UN: Are the industrialized countries ready?
"Most of the OECD's industrialized countries are not yet fit for the new commitment to global sustainability: many are still far from achieving the global policy goals ... And many indicators are in danger of completely missing these goals. The biggest deficits are shown by the industrialized countries in their poorly sustainable production and consumption patterns. In addition, their economic systems are often worsening the trend towards social inequality. "
- 18) Building stock in Germany
 - a) Single / double family houses 15 million
 - b) Multi-family houses 3 million
 - c) Non-residential buildings 1.8 million
- 19) Building materials – Pollutants (Eric: This table covers the pollutants in residential homes – can translate it but suspect you don't need it)
- 20) Graph: Building Drivers from 1980 to 2020....for example
 - a) Solar houses
 - b) Low energy houses
 - c) "3 Liter – Houses – Passive Houses
 - d) Non heating energy houses
 - e) Minimum Requirements – WSVO/EnEv)
- 21) No idea what this slide/graphic is trying to communicate
- 22) Building Information Modeling - Documentation
 - a) Idea → Design → Planning → Implementation → Release → Construction
 - b) Graph looks at the capability to change and the cost of changes to determine the shifting of changes in earlier planning phases

- 23) Integral life cycle assessment Graphic (Self-explanatory?)
24) Building Information Modelling – Lego (Not sure what it is trying to say – can guess)
25) Graphic: 14 New Østfold Hospital, Norwegen (BIM related)
26) Graphic: 14 New Østfold Hospital, Norwegen (BIM related)
27) Acknowledgements
- Architect and facility manager
 - Partner at PKS Kommunikations- und Strategieberatung GmbH
 - Member of the BIM work group of the reform committee "large projects" of the BMVI
 - Member of the DIN Standards Committee Building Management - Work Group Information Management with BIM
 - Spokesperson of the BIM Cluster Berlin-Brandenburg (Planen-Bauen 4.0 and buildingSMART e.V.)
 - Member of the BIM Expert Group of the Federal Chamber of Architects
 - Member of the round table "Sustainable Building" of the BMUB
 - Consultant to the project group "Building for the Future-Sustainable Building" of the Federal Minister of Agriculture, Forestry and Environment,
 - Member of the Commission "Sustainable Building" at the Umweltbundesamt
 - Member of the Steering Group LED-Leitmarktmarktinitiative des BMUB
 - Member of the team LED-Catwalk Technique Museum Berlin
 - Member of the Committee for the Facility Management Congress Frankfurt am Main
 - Speaker of the Advisory Board of DENEFF - German Enterprise Initiative on Energy Efficiency e.V.



Please send comments and suggestions to: sustainability@ifma.org