

August 2015 Volume 10 33rd International Conference of the System Dynamics Society Cambridge, Massachusetts July 19-23, 2015

From Our Sponsors

We at VENTANA SYSTEMS AND GREENWOOD STRATEGIC ADVISORS greatly enjoyed seeing old friends and meeting new ones at the conference this year.

While we haven't made a marketing splash of it, this has been a momentous time for us, with the release of Ventity in a public beta test. Ventity is a new simulation software package that complements Vensim. This software is an effort to combine the best aspects of traditional System Dynamic tools, operational and visual thinking and freedom from programming, with modularity supporting sectors, agents and collaboration. It replaces arrays with lists of entities, making equations easier to write, and adding the ability to dynamically create and delete structure and conveniently represent sparse matrices like



project prerequisites and social networks. It has a new, clean look and a flexible development environment. See Ventity.biz for details.

Meanwhile, we're continuing the evolution of Vensim in parallel, with interface refinements, XMILE support and even more speed in the works. We were gratified to see in the proceedings many fine examples of work developed in Vensim and powered by Vensim servers.

With our partners, Greenwood Strategic Advisors, we are working on management platforms for a range of dynamic systems, like:

- Metropolitan sustainability energy, economic, environmental, and societal;
- Disequilibrium economics of the Eurozone debt crisis;
- Large-scale project management and valuation of delay and disruption;
- Health care system performance, economics and pharmaceutical marketing; and
- Risk and reserves in financial loan portfolios.

Reinventing Life on a Shrinking Earth requires broad understanding of new models, created with new tools. We are proud to be part of that transformation.

Ventana Systems, Inc. - ventanasystems.com • Greenwood Strategic Advisors AG - greenwood-ag.com

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Other Conference News

We encourage you to complete the brief, online Post-conference Survey and share your thoughts. It is available on the conference website for a limited time.

The anticipated publication date of the web proceedings is the end of September. At that time, an e-mail notice with a link to the web proceedings will be sent. There will be an option to purchase a print version and a CD-ROM version of the full proceedings.

As soon as possible, we will post photographs from the conference on the website; an e-mail message will be sent when they are available. If you have photos to share, please send them to us to add to the website collection. (If there is a photograph of you on the web that you would prefer us to remove, please let us know at conference@systemdynamics.org.)

The Call for Papers is available on the Society website for the 2016 Delft, Netherlands Conference. Please take a look and plan to attend.

It was a pleasure to connect with so many of you at this year's conference. Our special thanks go out to the Society and all of you who helped prepare for and conduct the event.

For those we did not get to speak with, here is an update on our System Dynamics work. PA CONSULTING GROUP'S strategy and modeling experts work with major organizations to help solve some of their most important challenges. We combine world-class analysis expertise with in-depth industry knowledge to develop practical and enduring solutions. We help clients with a range of issues such as:

- Corporate strategy and market analysis Analyzing company and market behavior under different scenarios to identify actions and strategies that deliver superior, sustained performance.
- Government policy, planning and assessment Addressing complex government challenges for issues such as regional stability, major program acquisition, smart cost reduction, healthcare, transportation, and energy policy.
- Improving performance on major projects Understanding strategic risks and finding leverage points to improve performance on large, complex programs, and project portfolios.
- Negotiation support and dispute resolution Analyzing business dynamics to help quantify and explain issues in dispute, working
 with stakeholders to help reach agreement in negotiations, mediations, and legal disputes including serving as expert witnesses.

PA Consulting Group is a leading management, IT, and technology consulting firm, using a wide range of services to help clients around the globe from our headquarters in London and our offices in Europe, the US, the Gulf, and Asia/Pacific.

Our Strategic Analytics and System Dynamics Work is Growing. We are interested in sharp, well-rounded, analytical people committed to making a difference by solving complex problems in close cooperation with clients and colleagues. While we are hiring outstanding people with a range of capability across PA, we have a special interest in candidates with System Dynamics expertise. Candidates should be passionate about helping clients tackle tough and unstructured challenges and be willing to stretch themselves on many fronts. To learn more about our team please contact Kathy Tran kathy.tran@paconsulting.com or 1 (617) 225-2700.

We look forward to seeing you in Delft, if not before!

Experience Multimethod Modeling!

ANYLOGIC is the only simulation tool that supports all the most common simulation methodologies in place today: System Dynamics, Process-centric (AKA Discrete Event), and Agent Based modeling.



The unique flexibility of the modeling language enables the user to capture the complexity and heterogeneity of business, economic, and social systems to any desired level of detail. AnyLogic's graphical interface, tools, and library objects allow you to quickly model diverse areas such as manufacturing and logistics, business processes, human resources, and consumer and patient behavior.

The object-oriented model design paradigm supported by AnyLogic provides for modular, hierarchical, and incremental construction of large models. AnyLogic is a simulation software for the entire business lifecycle.

AnyLogic Conference 2015 • November 4th and 5th, Philadelphia, PA, USA. The fourth annual AnyLogic Conference will continue to prove the power of collaboration, not only with the AnyLogic team, but other experienced model developers. Don't miss the opportunity to see how AnyLogic is being applied across multiple industries, experience innovative ideas and expand your vision of AnyLogic software.

For your convenience, the two day event falls directly after the INFORMS Annual Meeting. INFORMS attendees should plan to stay Wednesday evening and join us for Wednesday afternoon and Thursday morning presentations. The Conference will be held in the Trumbauer Ballroom of Le Meridien Philadelphia Hotel. The hotel is less than a half mile from the INFORMS venue.

In addition to the Conference presentations and multiple networking events, the AnyLogic Conference will offer an optional training course Wednesday morning prior to Conference registration and presentation proceedings.

It was a pleasure to see so many friends and to make new ones at the System Dynamics Conference in Cambridge. STRATEGY DYNAMICS genuinely appreciates the support, feedback, and encouragement we received.

Sysdea – Online Simulation software - sysdea.com A substantial upgrade has been released and we had great feedback from visitors to our booth. The software is FREE for all users until the end of September, 2015, so why not take a look? Individuals holding a faculty post will continue to have access to free accounts after that date, and standard subscriptions revert to \$15/month (+ tax where applicable). Plans for enabling access at the K-12 level are also in progress, as well as a range of additional features.

Agile System Dynamics Workshop Kim Warren's "Agile System Dynamics" was recorded but a workshop video from the Delft conference provides a better introduction – see sdl.re/AgileDelftWS. The video is about 1 hour and 15 minutes. A complementary presentation, also recorded at Delft, "Agile SD: Fast, Effective, Reliable," is also available at sdl.re/AgileDelft.



Online Business simulations – sdgamesonline.com Our suite of "Microworld" business simulations are now established online at sdgamesonline.com: "White Label Restaurants" and "People Express" are now available. More are due to go online soon.

For more information on any of our activities or products email us at contact@strategydynamics.com.

WHOLE SYSTEMS PARTNERSHIP (WSP) was pleased to see a thriving community explore the wide range of contributions that System Dynamics (SD) is making to both the academic and practical challenges facing us in 'reinventing life on a shrinking earth' at the recent conference in Cambridge MA. Such a challenge is, of course, not simply a 'one year' wonder but a lifelong challenge, as any System Dynamics practitioner used to working with delays will be only too aware.



Participants at the conference will have their own 'take aways'. For WSP the themes of sustainability and capability have been useful reminders as we support policy and strategy work in the health and social care sector in the United Kingdom. We believe that both these themes require significant contributions from the 'intangibles' we seek to capture in our understanding and therefore modelling of the systems we are part of. WSP is continuing to work in developing the concept of Relational Value as an important component of sustainable change—early thoughts on this, as well as the wide range of other SD supported work in the UK health sector can be found at our website thewholesystem.co.uk.

We look forward to seeing you in Delft......

Join the Wholefood Revolution with EAT NĀKD!

Eat Nākd was proud to be a first-time sponsor of this year's System Dynamics Society Conference. Natural Balance Foods is a young British company devoted to increasing world happiness with yummy, healthy snacks, humor, and helpfulness. They are the UK's best selling natural snack bar and are available in 28 other countries (and counting). In the US they are currently available on our website at EatNākd.com or on Amazon. We hope you enjoyed an assortment of bars during the conference and that you will explore more of our delicious flavors soon. We will begin major domestic retail distribution sometime later this year.



The modern snack is swiftly evolving—and must. As people move away from hyper-processed, low-nutrient foods and embrace new wholefood alternatives, Eat Nākd will be here to help provide the peace of mind and wide-ranging health benefits consumers increasingly expect. People are delighted when they discover Eat Nākd bars are simply fruits and nuts 'smooshed' together, and therefore not only taste good, but are good for you too! Hope you like them as much as we do!

LUNDBERG FAMILY FARMS was honored to be asked to support the Systems Dynamics Society Conference in Cambridge this summer. We provided a conference satchel for all attendees with the image of Albert Lundberg's vintage Farmall tractor on one side and the Society logo on the other.

Lundberg Family Farms is committed to producing the finest quality rice and rice products for your family. Since 1937, the Lundberg family has been growing healthy, great tasting rice while respecting and sustaining the earth. Today, the third and fourth generations carry on the family heritage by using eco-positive farming methods that produce wholesome, healthful rice, rice cakes, rice chips, and risottos while improving and protecting the environment for generations to come.



CRISPY GREEN was happy to be a part of the System Dynamics Society Conference this year in Cambridge, MA! We heard that our Crispy Fruit snacks were a real winner with the participants, so we'd like to extend a special offer to those who have attended! For a downloadable coupon that offers \$1.00 OFF two single bags of Crispy Fruit, please go to crispygreen.com/cg-online-coupon!



- Light and flavorful
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Feed your body and your mind with 100% pure fruit, nothing else! Our healthy and delicious freeze-dried fruit snacks are the perfect solution for a snack attack anytime, anywhere!

SANDIA NATIONAL LABORATORIES would like to thank the System Dynamics Society for the opportunity to again sponsor the conference. We believe that our sponsorship expresses the sentiment of our motto, "Exceptional service in the national interest." Our staff was able to volunteer to help make the conference the success it was and those of us that attended enjoyed and learned. Thank you to everyone who spoke with us and visited our display. We hope to meet all of you again in Delft in 2016.



It was great for everyone from ISEE SYSTEMS to see so many old friends and new faces at the Cambridge conference this year. From the summer school held at WPI before the conference (a fantastic experience), to the Thursday workshops, the two bookends of teaching were surrounded by lots of learning, talking and fun. We hope you enjoyed it as much as we did.



With the release of Stella Professional, 2015 has been a very exciting year for isee systems and we were delighted with the interest the software generated during the conference. The XMILE standard also passed an important milestone and is under formal review to, hopefully, be approved as an OASIS standard very soon. There is growing interest and activity around XMILE (xmile.systemdynamics. org) and we had a great meeting during the conference; the benefits of a standard are already starting to be seen.

Special congratulations go to Therese Bennich, Tom Bongers and David Collste; they are the recipients of the 2015 Barry Richmond Scholarship award for their work on exploring degrowth pathways. We are excited to see a new generation thinking forward about what to do next at the community, country, and global level.

We look forward to seeing you next year in Delft, and would be happy to hear from you before then. Visit us at iseesystems.com for more information.

The INTERNATIONAL SOCIETY FOR THE SYSTEMS SCIENCES (ISSS) is committed to the investigation and implementation of inter- and transdisciplinary inquiry into the nature of complex systems, and remains perhaps the most broadly inclusive. Beginning in 1954 at the Stanford Center for Advanced Study in the Behavioral Sciences, it was then formally established as an affiliate of the American Association for the Advancement of Science (AAAS) in 1956. The initial purpose of the society was to encourage the development of theoretical systems that are applicable to more than one of the traditional departments of knowledge. Since then, the ISSS has expanded its scope to include the practical application of systems methodologies to problem solving. ISSS welcomes interdisciplinary thinkers interested in all systems, e.g. physical systems, biological systems, social systems, ecological systems. It brings together scholars and practitioners from across academic, business, government, and not-for-profit communities to learn together. In 2015, Professor Ray Ison presided at the 59th Annual Meeting of the ISSS in Berlin August 2-7; the conference theme of "Governing the Anthropocene". At



the conference, a worldwide community of system people--researchers, consultants, and students--convened for a week of thought-provoking presentations, informal workshops, and sharing ideas on advances in systems. The 60th meeting of ISSS, July 23-28, 2016, will be held at the University of Colorado, Boulder, USA; our President is Dr John Kineman. For further information about either meeting, please consult our website: isss.org/conferences/ or contact the office at enquiryisss@gmail.com.

The GEORGIA HEALTH POLICY CENTER (GHPC) at Georgia State University was proud to sponsor this year's System Dynamics Society Conference in Cambridge. What an exciting meeting! We were pleased to meet and connect with so many of you.



For those of you not able to stop by our booth or attend our Thursday morning workshop, we welcome opportunities for you to learn more about the GHPC and our System Dynamics work. We would also value learning about your techniques for engaging decision-makers on important policy issues using System Dynamics tools.

The Georgia Health Policy Center is a research center within the Andrew Young School of Policy Studies at Georgia State University, working to improve health at the community level. We provide evidence-based research, program development, and policy guidance locally, statewide, and nationally.

The GHPC has been leading efforts in the U.S. to engage with policymakers on important health policy issues using conversational systems thinking skills, stock and flow maps, and simple and complex models with the goal of moving policymakers into evidence-based, more collaborative decision-making. For more information and to watch a video on this unique program, please visit our website at ghpc.gsu.edu.

In conjunction with our partner, Pontifex Consulting (findinghighleverage.com), we continue to explore ways to engage decision-makers and improve research translation into policy and practice, using System Dynamics tools. For more information, please contact Rachel Ferencik at rachel@gsu.edu.

The Brown School's SOCIAL SYSTEM DESIGN LAB (SSDL) at Washington University in St. Louis was pleased to sponsor this year's System Dynamics Conference. The event was a great opportunity to connect with old friends and colleagues as well as share our work with new conference attendees.



We spoke with many of you at our booth, before and after SSDL student/staff parallel and poster sessions, and during many of the social events in Cambridge. For those of you that we weren't able to connect with, we welcome opportunities for you to learn more about the SSDL's work by following us on Twitter @BrownSSDL. We look forward to seeing you in Delft next year, and would be happy to hear from you before then! For more information, please email brownssdl@wustl.edu.

System Dynamics has made immense business, science and human contributions in many areas, but one of the great opportunities for impact is from careful application to the function and malfunction of human biological systems. When the systems of the human body work well, they are perhaps the most elegant of all control systems. When these systems malfunction they yield the most complex, intractable disorders affecting humankind, from autoimmune disorders

COOPER HUMAN SYSTEMS

such as type 1 diabetes, to the immune deficiency of HIV, to cancers of nearly every form. COOPER HUMAN SYSTEMS is devoted to employing System Dynamics to understanding and curing systemic diseases and disorders of the human body.

We have developed a model to simulate and design a cure for HIV. More than 30 years since its identification, HIV still afflicts millions of people and causes 5,000 deaths per day. Conventional therapies have all focused on constraining the virus; they do not cure the disease. Our System Dynamics model accurately simulates the course of HIV/AIDS in the body; analyses have identified multi-therapy treatment that eliminates the virus in the simulation. Clinical trials are under way to test that solution.

We believe this is but the first example of systemic human disorders that benefit from System Dynamic modeling.

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The Conference Sponsor Notes is published by the System Dynamics Society once a year following the conference.

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