SANTIAGO G. VELEZ

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BUILDING PERFORMANCE ENGINEER

HANDS-ON ASHRAE-CERTIFIED CONSULTANT | TARGETING SENIOR MECHANICAL ENGINEER SUSTAINABILITY ROLE

Seven years of experience creating business as an independent consultant; Associate Professor and keynote speaker; instrumental in growing Argentinean building performance sector with clear understanding of the big picture. Won bids for 30+ exciting and diverse projects. Applied ASHRAE-certified knowledge of modelling, commissioning, design of high-performance buildings to new and existing buildings to get every single one LEED certified.

AREAS OF EXPERTISE

Business development | Communicator | Team management | Project management | Leadership | High-performance building design | Building physics | Energy, thermal comfort and lighting modelling | HVAC design | Commissioning sustainability certification | LEED | ASHRAE | Programming | Python | Matlab | BIM | Revit | EnergyPlus | IES VE

EXPERIENCE

Independent Consultant | Building Performance Engineer | 2011 – Present

Consulted on every aspect of building performance and sustainability from schematic design to completion and operation. Client-focused and can-do attitude, with ability to manage multiple long-term projects simultaneously. Delivered performance strategy, modelling, mechanical systems design, commissioning and Energy Audits. Integrated into multi-disciplinary teams and added value from day one.

**Selected Projects:**

* **DUBAI WORLD EXPO 2020:** mass compliance energy modelling for LEED (200k m2 residential)

LEED compliance energy modelling for 20 residential buildings within ten weeks using IES VE. Achieved via careful planning and development of Revit templates, Python scripts to edit gbXML, mining results from reports and populating Excel spreadsheets for LEED submittal.

* **BANCO GALICIA:** LEED feasibility study (300 m2 bank branches)

Analysed typical existing bank branch design for Energy, Lighting and Comfort. Supplied four different proposals generating savings of up to 70% in total energy, increasing levels of LEED certification and the possibility of being the first NetZero building in the region.

* **URBANA:** LEED O&M Energy and IAQ Credits (55k m2 office)

Carried out energy and Interior Air Quality audits and retro-commissioning to identify operational problems. Achieved compliance with ASHRAE 62.1, a 20% energy saving and balanced ventilation rates with minimal investment, by returning HVAC operation to how it was originally designed.

* **JP MORGAN CHASE:** Mission Critical Commissioning (Data Center 11k m2).
* **SANTANDER BANK:** Building performance analysis (Energy Lighting 90.1 PRM) and design (12k m2 office).
* **JOHNSON & SONS:** Compliance energy modelling for LEED GOLD in record time (11k m2 office).
* **TETRA PAK:** Energy modelling for LEED, performance gap analysis (6k m2 office + manufacturing, new + existing).
* **BUENOS AIRES CITY GOVERNMENT (Foster & Partners):** Comfort analysis for LEED GOLD compliance, complex chilled beams + UFAD building system and CDF report analysis for compliance with ASHRAE 55-2010 .
* **CATALINAS IRSA TOWER:** Building performance analysis (Energy Lighting 90.1 PRM) for LEED GOLD, achieving required 25% energy savings including analysis of different façade options (18k m2 office).
* **COMODORO RIVADAVIA AIRPORT:** Compliance energy modelling and LEED GOLD analysis. (17k m2 Airport).
* **SKF:** Building performance analysis, achieving up to 32% energy saving for 90.1 PRM (6k m2 office).
* **OSDE:** Energy modelling for LEED and analysis of five corporate office buildings (15k m2 office).

Go to [santiagogvelez.com](file:///C:\Users\R\Documents\00-WIP\JobHunting\CVs\santiagogvelez.com) for more details.

Faculty of Art and Design, Buenos Aires University | Associate Professor |2013 – Present

Lectured at postgraduate level in one of the world’s top universities (#31 Art & Design QS world ranking). Inspired building professionals to integrate building performance and sustainability analysis into their BIM projects.

* Designed and delivered three courses on building physics, sustainability and BIM to around 100 professionals.
* Excellent reviews from students and degree director.

IBPSA Argentina | Founder, VP, then President | 2012 - 2015

* Chaired meetings, organised workshops and lectures for academic researchers and professionals at the Energy and Environment Argentine Association annual congress.
* Collaborated with local universities, which led to teaching on two postgraduate courses.
* Worked with IBPSA Brazil and Chile to organise a South American IBPSA bi-annual congress.

Imprek | Partner-Manager | 2008 – 2011

Joined this flourishing consumer goods startup as technical manager in charge of supply chain, assembly lines and customer support. Fundamental in achieving five-fold growth in sales and employees.

* Completely re-designed the manufacturing process and the supply chain that facilitated continuous growth in demand, while reducing rework 80% and delivery delays 40%.

Ternium (leading Argentine engineering company) | Young Professional Engineer| 2006 – 2008

Selected for Ternium’s highly competitive Young Professional programme. Began as assistant project manager in the Engineering and Environment sector. Final position was head of maintenance on a continuous zinc-coating line.

* Modelled gas savings of the continuous-coating oven retrofit and delivered technical bid specification in record time.
* Planned monthly maintenance line stops involving 40 people working simultaneously. Demonstrated ability to lead a team of long-serving employees.

WORKSHOPS AND PUBLIC SPEAKING

Spoke and taught at more than 20 events. Evangelist for building performance simulation. Excellent reviews resulted in concrete business leads and an increase in IBPSA Argentina members.

★ 2012 to 2017 | Thermal Comfort ASHRAE 55 2004-2010, Energy Modelling ASHRAE 90.1-2007-2010, Ventilation requirements ASHRAE 62.1-2007 -2010 | Invited lecturer at the postgraduate course ‘LEED V4: Design and application’, Torcuato Di Tella University

★ 2014 | ‘Building performance simulation: What are we waiting for?’ | Keynote speaker at Renewable Energy and Environment Argentinean Association (ASADES) annual conference

★ 2013-2015-2017 | ‘Introduction to building performance simulation’| Workshop at Biennale of the Faculty of Architecture, Design and Urbanism, University of Buenos Aires

EDUCATION AND CREDENTIALS

DEGREE: Instituto Tecnologico de Buenos Aires | (B.Eng) Bachelor in Mechanical Engineering (2014)

B.Eng. thesis (mark awarded: 10 out of 10): Designed an easy-to-use simulation-based optimisation tool on MATLAB, combining EnergyPlus with optimisation algorithms, able to reach simultaneous objectives. Achieved convergence after 300 runs for a 4M design universe.

CERTIFICATIONS: ASHRAE BEMP, HBDP, CPMP, LEED GA, DGNB consultant; Working towards: CEng, WELL AP, MSc. Data

1/2

TRAINING: BRE Energy Manager Course, IES VE for LEED training

OTHER SKILLS: Grasshopper, Ladybug tools, Dynamo, building systems design, BREEAM, ASHRAE Standards, Office, Excel. Part L, TAS, Design Builder, Part L and F, Radiance, team player, mentor.