



Robb Olsen | Robb@TransOrbitalDynamics.com | 513-240-4157



### Skills & Focus Areas

Inspiring and teaching future innovators.

Creating game-changing new products, services, business models and educational experiences.

Building capability in rigorous, human-centered innovation.

### Education & Higher Ed Roles

**Adjunct Professor:** School of Engineering Design, Technology & Professional Programs, Penn State University, 2020-21

**Executive in Residence:** Technology Entrepreneurship & Commercialization, NC State Univ., 2020

**Innovator in Residence:** Founder & Adjunct Professor for the *Intersect CPG* Innovation Accelerator course, Northwestern University, McCormick School of Engineering, Segal Design Institute, 2015-16

**Industry Sponsor, Behavioral Science for Innovation - Advanced Research Program:** *Human Decision Making & Innovation Adoption*, Univ. of Michigan, Bio-social Methods Collaborative, & NTU Singapore, DEON Lab, 2016-17

**Certified Professional Innovator Certificate**, Ross School of Business, Univ. of Michigan, 2016-17

**MS (equiv.) Technical Management**, P&G *Advanced Learning Conference*, 1987-88

**BS ChemE, Honors**, 3rd in class, University of Toledo, 1982

## Leadership Roles and Key Accomplishments

Since creating [TransOrbital Dynamics](#) in 2019, I've helped discover new product platforms, strengthened organization design for innovation, and built new partnerships between industry and academia for major pharma and consumer goods clients.

In my 35 years at [Procter & Gamble](#) I helped build some of the world's largest and most iconic brands, and also some of the smallest. I led global communities of thousands and teams of a few visionary individuals. I created and launched many successful product initiatives, & crafted numerous patented product designs (47 granted patents). I also worked hard to improve *how* innovation was done. I regularly sought out non-traditional leadership roles as these were where I could make the greatest difference, learn the most, and keep pushing the boundaries of what's possible.

### P&G University-accelerated Innovation Program (2008—2017)

My most recent success before retirement was creation of P&G's *University-accelerated Innovation* program with university partners Northwestern, Michigan and NTU Singapore, which accomplished three objectives:

**Unleashed** more transformative innovation into the world through scalable industry/academia partnerships focused on innovation projects & behavioral research.

**Created** better educational experiences for graduate students in integrated design, engineering & business while creating a pipeline of renaissance innovators for P&G.

**Synthesized** the best innovation paradigms, frameworks and practices from the many competing approaches taught and practiced around the world into a thoroughly modern, state of the art approach that has been successfully applied in both academia and industry. See attached portfolio for highlights.

In the course of this work, I helped build curriculum, strengthened degree programs, created multi-\$M research initiatives, and built a global thought leader network which included colleagues at Carnegie Mellon, Penn State, SUTD Singapore and TU Delft.

### Other Select Leadership Roles at P&G

**Global Products Research Community of Practice** (2004-2010) - >1500 enrollment/20% of R&D. Expanded contributions and capability for the entire community. Revised and renewed the org design & culture, greatly expanded the training curriculum, introduced new research methods and crafted comprehensive knowledge-sharing, connection-making, and collaboration processes and tools. Products Research was founded by P&G in 1923 to enable rigorous human-centered design and innovation, and was unique in industry for decades, further explained in [this article](#).

**Transformative Platform Technologies Commercial Opportunity Discovery** (2016-2017) - Numerous >\$B product/service/community opportunities identified utilizing behavioral science and a fast, reproducible, scalable proto-cycle approach.

**Behavioral Science for Innovation Program** (2005-2017) - which led to adoption of robust behavioral experiments as the best way to guide innovation, replacing traditional market research methods. Scaled to hundreds of P&G initiatives.



# INNOVATOR IN RESIDENCE

## NORTHWESTERN UNIVERSITY

### SEGAL DESIGN INSTITUTE

## CRAFTING THE “HYBRID STARTUP”

### Resources of a BigCo, Agility of Startup, in an Academic Setting



The primary accomplishment of my Innovator in Residence tenure at Northwestern was creation of the *Intersect CPG* program (now completing its 5th year). This validated a hypothesis I had long held that if we combined the deep domain knowledge of a big successful company with the agility and focus of a startup, it would unleash much bigger, more successful innovation than either could accomplish alone. This is indeed the case.

The “startup” was the multi-disciplined graduate student team (business, engineering, design, marketing communication), angel funded by P&G for a quarter. P&G provided the starting consumer, business and technology hypotheses and high levels of coaching and access to relevant data and expertise during the term. I

**Intersect CPG: Transformative Product & Business Model Innovation**



**Kellogg, McCormick & Medill Graduate Students Wanted**  
 for DSGN 495-40 Pilot, WINTER 2016  
 Meets Tuesdays 2-5pm (main class) and  
 Wednesdays 2-3:30 (innovation lab) in the  
 Ford Design Studio

In this course, creativity meets rigor, and both win!

Join **Robb Olsen** of Procter & Gamble and **Craig Sampson** of TBD Innovation for an experiential and entrepreneurial course living at the intersection of transformative product innovation, design thinking, and business model innovation. Student teams will work under NDA on 5 real-world projects sponsored by P&G.

To enroll in Intersect CPG, please send resume and a brief statement of interest to Robb Olsen [olsen.re@pg.com](mailto:olsen.re@pg.com)

SegalDesignInstitute

Hybrid Startup  
Growth Engine:

Marketplace of Hybrid Startups

Single Hybrid Startup

Potential is significant...

- MUCH higher startup success rate
- \$Bs in BigCo scale opportunities
- Higher hit rate for VCs
- Building new cohort of founders
- Unleashing follow innovation potential



$$\text{Market Of Hybrid Startups} = \sum_{i=1}^m (n_m \text{Hybrid Startup})$$

Where  $n_m$  = number of hybrid startups done by BigCo<sub>m</sub>

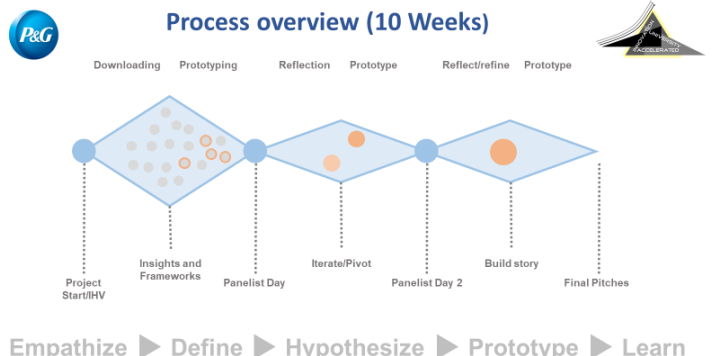
structured the course to provide three full rounds of primary consumer research starting with in-context ethnography, and a set of innovation frameworks to guide hypothesis formation and testing, including both *Lean Design Thinking* (p3) and a choice of business model canvases (my *Living Business Model*, or Osterwald’s *Business Model Canvas*).

The output was remarkable, with the teams progressing from idea to fundable proposition in just 10 weeks (the duration of winter quarter). The teams produced a complete business model with evidence and analysis to support choices, a sponsor pitch with clear paths to market + paths

to profit and scale, a compelling consumer-facing pitch, and direct evidence from fast cycle prototype design & testing that the innovation would be adopted by the target audience. A mid-term data-based pivot of target consumers or product proposition was also an option.

*Intersect CPG* was a win for all involved. Students got a very high quality entrepreneurial learning experience that many said was the highlight of their masters studies, while P&G received exceptional holistic innovation propositions that would have taken vastly longer to produce internally (or not been done at all).

Based on the success of *Intersect CPG*, I created an internal version, *Intersect P&G*, that created even stronger results, with several \$B in market potential identified. I look forward to continuing to build out the Hybrid Startup approach.



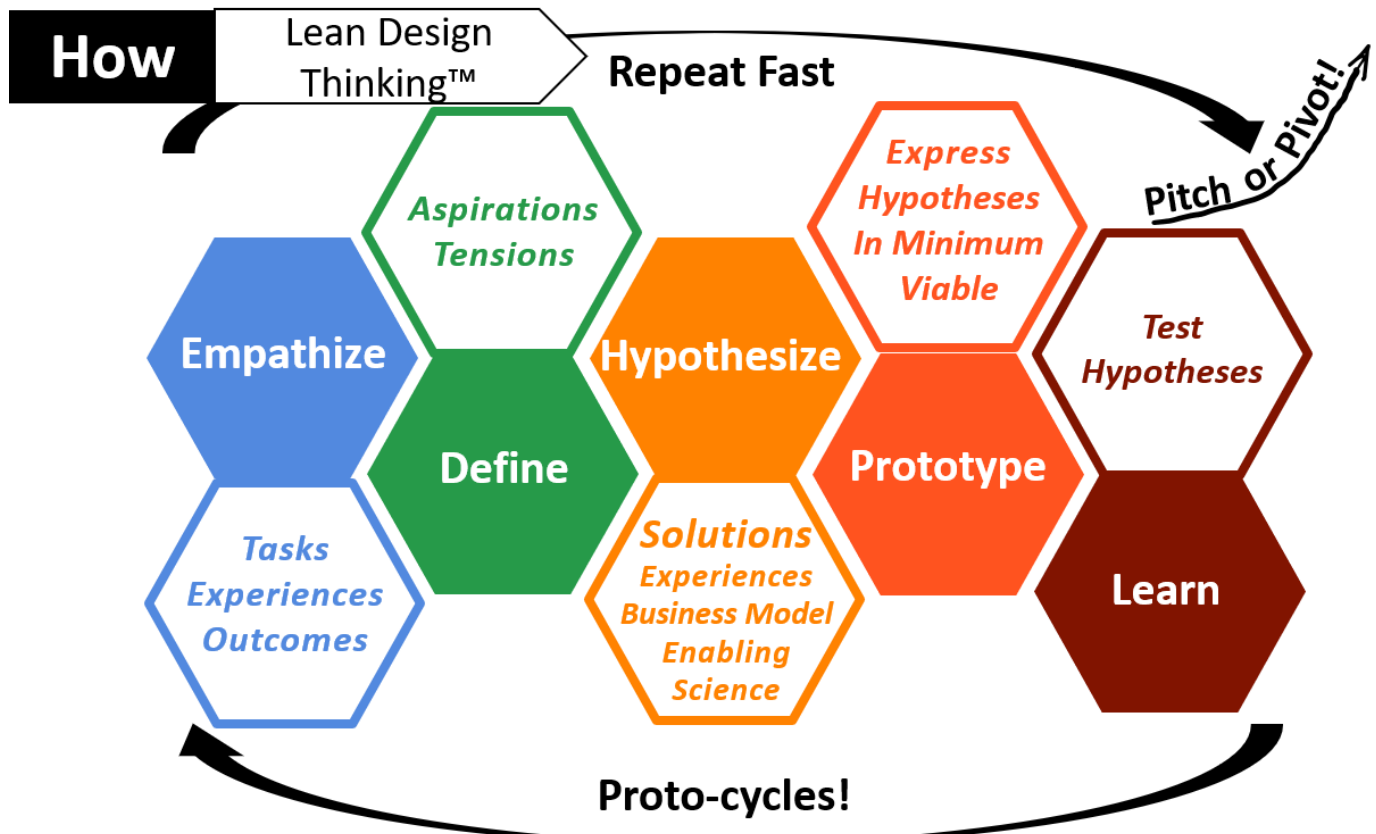


INTEGRATED INNOVATION FRAMEWORKS

# LEAN DESIGN THINKING™



One of the most effective ways to "do" Innovation is to combine the best of *Lean Startup* with *Design Thinking*, seasoned with a healthy dose of *Products Research* and *Behavioral Science* for rigor. *Lean Design Thinking™* works better and faster than any of the individual constructs alone, yet is no more complicated. LDT wraps the classic *Design Thinking* activities in modern fast cycle hypotheses testing. Further, each DT activity is paired with a focused set of "whats" that accelerate progress. For example, **Empathize** calls for a focus on human *tasks* (or *jobs*), *experiences*, and *outcomes*, in context. **Define** calls for us to understand *tensions* in the current experience and *aspirations* at both the task and life levels. **Ideate** in the original *Design Thinking* model is replaced with the stronger **Hypothesize**. The purpose of **Prototype** then becomes to express the key hypotheses and killer issues in the simplest way that enables a hypothesis to be quickly tested. **Learn** replaces **Test**, shifting focus to synthesizing the output of the cycle where hypotheses are confirmed, modified or discarded. Any cycle may lead to a **Pitch** or **Pivot**. *Lean Design Thinking* is an evolution of what I taught in my *Intersect CPG* class at Northwestern, and I currently use this in my consulting work as well with great success.







# INTEGRATED INNOVATION FRAMEWORKS BRAND EXPERIENCE INNOVATION



Brands are really fascinating things. So much effort is put into the *activities* surrounding brands, that many miss the fundamental *nature* of brands, i.e., that brands are *learned*. The implications for innovation are profound: Brand *experiences* must be designed to create the right kinds of human *learning* in the right contexts such that the learning leads to desired *behaviors* of brand trial, repurchase/adoption, and advocacy.

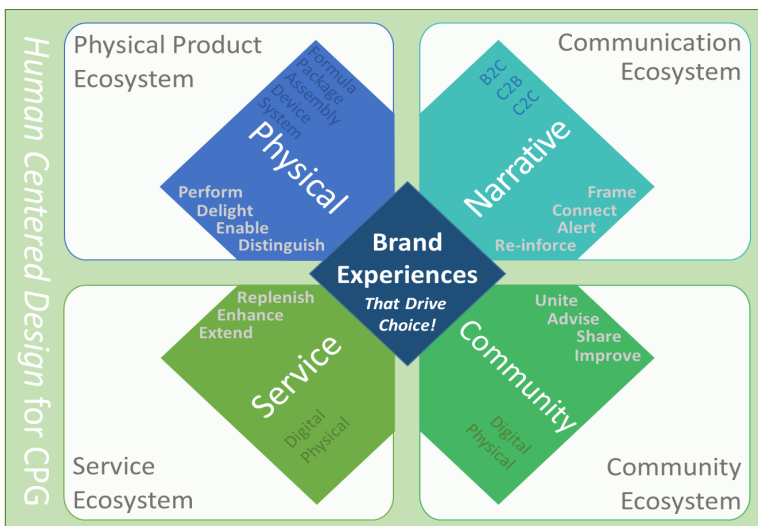
**Domains.** I've found it useful to categorize the different sources of brand experience into four domains: Physical (classically, products), Narrative (classically advertising, but in today's world, so much more), Community, and Service. Building a successful, modern brand requires deliberate design in *all four domains*. Both startups and BigCos often omit one or more domains to their detriment.

**Learning a Brand.** Behaviorally, brands are just shortcuts for human decision-making. They are *represented* by words and logos, but those are *not* the brand. Each brand is simply the sum total of that which an individual has *learned to associate* with the brand. Different kinds of experiences involve different types of human learning and carry different learning strengths. For example, negative *episodic* learning, like being hurt by a branded product during use, is very strong, requiring only one incident to influence future behavior, namely "I'll never buy that brand again!". All four learning modes below can generate brand learning, either positive or negative, and those who craft brand experiences, from engineers to marketers to coders, need to understand and apply these principles.



## Intersect Brand Experience Innovation Framework

*Brands are LEARNED, in Four Domains: Physical, Narrative, Community & Service*



the source of *new human learning* that becomes "*brand equity*" & a shortcut for *choice*

### • Associative learning



### • Episodic learning



### • Enculturation/Socialization



### • Play





# SELECT PRODUCTS & PATENTS

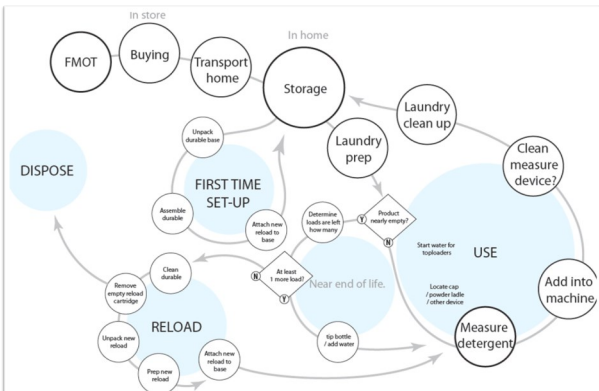
## TIDE CLEAN KIT



Tide Clean Kit in its natural environment, a laundry room.



Joy of discovery, opening Clean Kit for the first time.



CleanKit journey map, eliminating 11 dosing steps.



Tide CleanKit was my last major development for P&G's Fabric Care business (2010-15). The strategic goal was to create a new high end packaging experience that would drive consumer loyalty and add a new dimension to Tide and Ariel brand equity that could be leveraged for many generations of packaging innovation. Specifically, CleanKit:

- ◆ Resolved all six of the current tensions in the laundry usage experience that related to packaging: mess, get it all out, simplification, measuring desired dosage, handling and right for me.
- ◆ Delivered on aspirations like *\*worthy of display\** and *\*moments of pleasure\** in an otherwise mundane task, a real breakthrough for the category.
- ◆ Created a new durable/ reload Business Model that would grow the category as well as improve profit.
- ◆ Split the design into *durable* components optimized for great UX & *reload* components optimized for sustainability and cost, enabling a strong pipeline of future benefits built on enhancing the durable.

Clean Kit was introduced on Amazon and was well loved by those who purchased it. However, a flawed business model and poor path to market choices by senior leaders led to withdrawal. Many lessons were learned. My personal unit is still in use some 5 years later, as is true for many other CleanKit team members!

U.S. Patent Jan. 10, 2017 Sheet 1 of 12 US 9,541,440 B2

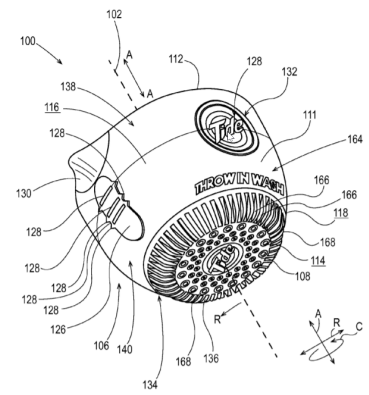


Fig. 1

Patented CleanKit dosing cup enables desired dosing and pretreating experience, eliminates mess.





# SELECT PRODUCTS & PATENTS

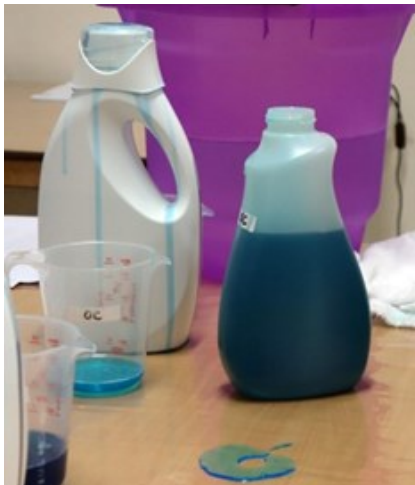
## DOSIE DISPENSER



Dosie on shelf in Latin America



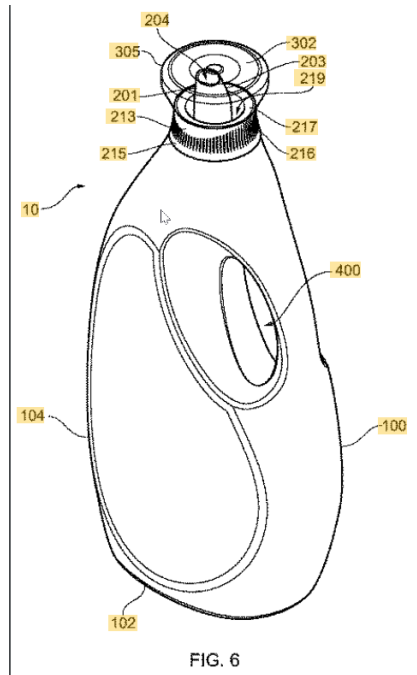
Brazilian consumer experiences Dosie controlled pour.



The previous doser (left) and associated mess.

**Dosie** (the dispenser spout and measuring cap) was a super-fast but critically important strategic design intervention to enable global role-out of a much improved and standardized liquid laundry bottle across all non-US markets. The project represented an investment of \$100's of millions in new molds, global supply chain and supporting marketing campaigns. The original doser design from a supplier was a messy disaster in many markets, as you can see from the picture bottom left, threatening the program. The middle picture shows Dosie in action, with it's extremely well controlled, mess free pouring. In addition, drain back from cap to bottle was mess free as well due to careful design of the cap/dispenser interface.

I had fun prioritizing this work as a break from leadership of overall category packaging strategy, immersing myself in fast cycle problem definition and product design. From problem to solution was an 8 week sprint of research and prototyping across four continents. I led all the consumer, technical, aesthetic and messaging design. I created a unique spout with controlled air venting remote from the discharge of the spout, the subject of the patent shown, and even dusted off a few fluid dynamics skills to calculate vent and spout dimensions. Worked great, and the design and it's derivatives are still on the market.





# SELECT PRODUCTS & PATENTS

## ALWAYS FLEXI-WINGS & SECURE FIT



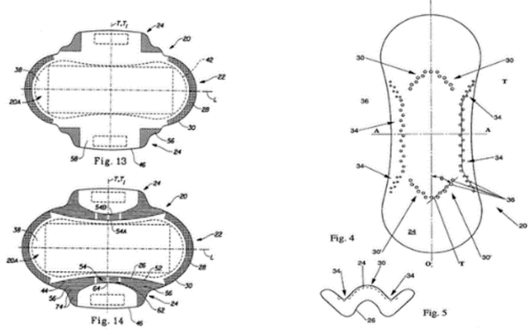
Recent Always pack showing Flexi-Wings & Secure Fit



Stay safe from run-off with all-around barriers

Stop uncomfy bunching with Flexi-Wings

Flexi-Wings on package claims.



Diagrams from Flexi-Wings and Secure Fit patents.



NPV >\$2B

These are my two favorite product and initiative designs from the first half of my P&G career, as they reset consumer expectations by solving fundamental physical and consumer experience problems with menstrual pads (Class 1 Medical Devices). They also drove business growth & have continued to provide competitive advantage decades after introduction.

**Flexi-Wings** applies a unique patented material modification to make otherwise high modulus polymer films stretchy. I created designs to apply this stretch to winged pads, allowing the wings to conform to panty curves without bunching the panty or the pad, significantly increasing wearing comfort and leak protection, and driving consumer choice in favor of products with this feature. 3D measurement & modeling of global panty shapes in situ provided critical design requirements.

**Secure Fit** is a way to control pad deformation during interaction with complex and dynamic human anatomy during wear. I developed numerous solutions to this problem, and we went to market with the most scalable, compression of the absorbent core material in a carefully designed pattern that, when combined with the local anatomy, caused the pad to deform in a controlled, rounded W shape. This provided improved but gentle body contact, reduced leakage, and enhanced comfort.

We conducted many rounds of fast cycle prototyping and human wear tests with both consumers and medical models to come up with the final designs.

Initial results grew Always market share >10%, and because of their longevity in market (as demonstrated by the recent package images at left), have a combined NPV in excess of \$2B.





# CURRICULUM DEVELOPMENT

## 24 NEW & UPDATED PRODUCTS RESEARCH COURSES



In addition to building the curriculum for *Intersect CPG (p2)*, my partner and I redesigned the entire PR training curriculum during our tenure as Products Research Community of Practice Co-leaders (2004-2010) to better reflect the latest advances in the relevant innovation sciences: Qualitative and quantitative consumer research, behavioral and digital research methods, statistical analysis, and innovation frameworks. Many of the courses are reflected in the chart below, though certain advanced courses were offered via more targeted communications.

We worked with the best internal and external leaders in each field to craft up-to-date content and to lead the teaching. We shifted the focus to flipped classrooms and highly experiential learning vs. the previous focus on lecture, and increased the rigor of each class as well. Finally, we carefully defined the new capabilities each student would acquire as a result of completing the course, and made sure we actually delivered. Fast cycles of class design, pilots, and feedback were used to quickly optimize the learning experiences and maximize the impact on global innovation capability.

### GLOBAL PRIDE TRAINING CURRICULUM

**■ =CORE classes for PRs**

Level	Class# and Description	Class Name/Description	Pre-Requisite	My Learning Link
<b>I. PR Fundamental Training</b>				
100	50302	PR College	PR Orientation	Register
100	50609	PR Discovery	None	Register
100	586001	JMP Cat for PR Local	N/A	Register
100	PR-100	PR Orientation (Training in a box with Manager)	None	
<b>II. Qualitative</b>				
200	50307	Qualitative Consumer Modeling	50302	Register
200	50311	Qualitative Research - Analysis	50302	Register
900	50740	Deep Insights to Inspire Breakthrough Products	50311	Register
<b>III. Quantitative</b>				
100	50310	Basic Statistics for PR	None	Register
100	50580	Questionnaire Design Fundamentals	None	Register
100	50581	Sensory for PR Fundamentals	50302	Register
200	50343	Performance Test Methods for C2P	50302	Register
200	50363	Discrete Choice Methodology: Conjoint	50374	Register
200	50374	Quantitative Research - Analysis	50302	Register
200	50519	Design of Experiments (DOX) for Products Research	50374	Register
300	50308	Foundations of Quantitative Consumer Modeling	50374	Register
400	50367	Quantitative Consumer Modeling: Drivers Analysis (Bayesian Belief Networks / BBN)	50308	Register
<b>IV. Other</b>				
200	50292	Demo Development	50302	Register
200	50312	Claim - Demo Support Fundamentals	50302	Register





# EVENT DESIGN & CAPABILITY DEVELOPMENT P&G PRIDE\* SYMPOSIA 2005-2009

\*Products Research Invents Deightful Experiences



How to explain P&G's PRIDE Symposium? Biennial renewal? Innovation knowledge & skills trade show? Week long party with 2000 of your closest Products Research and Marketing friends? C-suite showcase? Ultimate internal networking event? The PRIDE Symposia were all of these and more! In addition, designing the content architecture and vetting the keynotes, 40+ workshops and 100+ booths gave



me incredible insight into the full breadth of innovation at P&G.



**Renewal** was important because Products Research was unique in industry, and we had to work hard to sustain and evolve our culture.

**Trade show** was important because all 1500 of us in PR were tackling product design, initiative



creation, and innovation strategy, and could apply much of what our colleagues were learning and doing in other parts of the world if we could just *find out* about it.

And **Party**? Well, PR is hard, lonely work at times. We needed it!



Each symposium set records for attendance (including all senior leaders up through CEO), impact on innovation capability (>\$250M), and left me with many cherished memories.





# ENGAGING, SHARING, INSPIRING SPEAKING, WORKSHOPS, & ARTICLES

With MATSUMOTO, David et al. *Facial Behaviors and Emotional Reactions in Consumer Research*. Acta de investigación psicol. 2011, vol.1, n.3, pp.441-453.

On LinkedIn (click to view on-line)



University of Michigan, Ross School of Business, Invited Speaker, 2020

National Technological University, Singapore, Invited Speaker, 2016

Carnegie Mellon University, Integrated Innovation Institute Speakers Series, 2015, 2016

University of Michigan, Design Science Colloquium, 2015

Northwestern University, Segal Design Institute Speakers Series, 2014

Topics centered on the past, present and future of innovation, building on insights from my 35 years at P&G, partnerships with academia, and recent results of innovation model development & application.

Much more is available via my TransOrbital Dynamics website and on LinkedIn:

[www.TransOrbitalDynamics.com](http://www.TransOrbitalDynamics.com)  
[www.linkedin.com/in/robbolsen](http://www.linkedin.com/in/robbolsen)

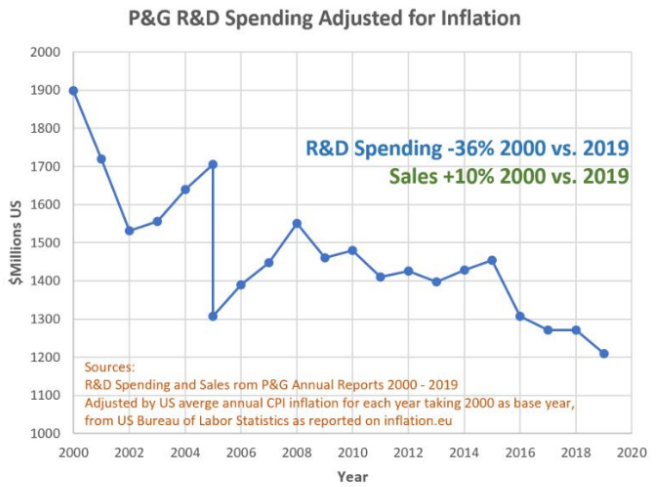
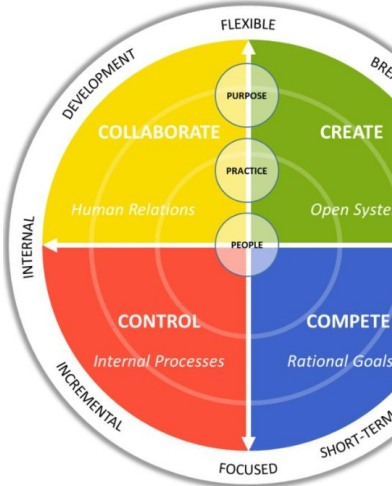
Products Research: 100 Years of Human Centered Design & Innovation at P&G (and what's next)  
Robb Olsen on LinkedIn  
August 17, 2019  
98 · 18 Comments  
1,669 views of your article

**Robb Olsen**  
Innovation: Master, Teacher, Student | CEO TransOrbital Dynamics Consultants | ...  
1mo · Edited ·

Another Innovation/P&G μ #CaseStudy, exploring 2 more detriments to big innovation: large reductions in R&D #spending since 2000 + impacts of repeated #downsizing. Can these be reconciled with leaders' calls for bigger #inn ...see more

**Robb Olsen**  
Innovation: Master, Teacher, Student | CEO TransOrbital Dynamics Co  
2mo · Edited ·

How might we better understand the #conflicting #values operating #organizations & use these values more constructively? The #Comp Framework brings great insight. Originally developed by Kim Cameron



71 · 19 Comments  
Like Comment Share  
10,393 views of your post in the feed

2 · 1 Comment  
Like Comment Share  
1,171 views of your post in the feed



# FEEDBACK & TESTIMONIALS

## Senior Leaders

**John Pepper**, CEO, Retired, Procter & Gamble

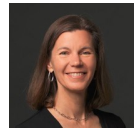
“That is an exciting set of insights you have sent me. Mind-opening; clear cut. They are clearly stated; concise. Your analysis is trenchant. Thank you for allowing me to forward this material. I’m going to do so with David Taylor (*current P&G CEO*) and Kathy Fish (*current Chief Innovation & R&D Officer*). I’ll probably share a copy with Gordon Brunner (*retired head of R&D*). I know how interested he’ll be in it, and agree. This is a great example of something I’ve long known: You are a creative, disciplined thinker. You saw these realities long before most of us did. Thank you for sharing them with me.” 2020



## Colleagues

**Elizabeth Twohy**, Research Fellow, Retired, Procter & Gamble

“Robb, it has been a privilege to have shared this time at P&G with you. For as long as I can remember, you have pushed past the barriers of understanding consumers to get to richer consumer insights, to create more delight with breakthrough new products, and to teach multiple generations of products researchers. From the early days of Deeper Insights and DEPTH in DEPTH, to identifying the foundational tools for studying unconscious reactions, to creating the amazing partnerships with Northwestern, U of M, and NTU – your passion to learn more and learn better has been contagious within the organization. I am so grateful to have been able to go along for the ride with you! As I always say to my son (who is an extremely creative artist) I wish I could see the world through your eyes, and I feel the same about you, as you have a vision for what’s possible that is both incredibly inspiring and so far beyond my ability to comprehend. I have loved being able to get glimpses here and there as you created new capabilities, and then with hindsight been blown away when seeing the impact and realized that this was just a part of what you had imagined. Thank you for your support in trusting me to help pilot and experiment with you and your patience with my endless questions, especially when there were hundreds of others like me asking the same ones!” 2017



**Dr. Edward Colgate**, Co-founder, Engineering Design Innovation, Northwestern University

“Robb made the “Kingdom of the Mundane” genuinely exciting. He created new products, new job descriptions, a new career path. He did it his way, he got things done, he built relationships. Robb had a big impact on a lot of lives!” 2018



**Susan Wilking**, Section Manager, Transformative Platform Technologies, Procter & Gamble

“Robb, your enthusiasm for learning & opportunistic energy draw people in, while you paint the picture of how our collective strengths can change the world. You’re the best partner I’ve ever had and a role model I admire. I aspire to pay forward the lessons you have taught me.” 2018



## Intersect CPG Students

**Bo Gustafsson**, Vice President, Tritium Partners

“Favorite class during my time in the Kellogg MMM program! You did a fantastic job putting that together!”



**Nicholas Daniel Phillips**, Founder & Designer, Studio 2133

“Intersect CPG was definitely a highlight of my time at NU both as a student and later as a Teaching Assistant!”



**Cindy Koh**, Graduate Student and Teaching Assistant, Northern Illinois University

“Robb was an excellent educator and demonstrated genuine passion in his craft as he taught our class at the Segal Design Institute. Our team learned a lot from him and loved his approach and generosity in sharing knowledge and providing guidance.”

