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Innovation and Entrepreneurship Boot Camp

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Designing Innovation Spaces

Britta McKenna, Chief Innovation Officer
Today’s Schedule

8:30-9:00  Welcome/Introductions
9-10:00   The journey to IN2
10-11:00  Tour of IMSA’s innovation spaces
11:15-12:00  Maker Space Panel
12:00-12:30  Lunch
12:30-1:00  Break/Open Maker Time
1-3:30     Design Challenge
3:30-4:00  Share Back
# Today’s Schedule

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Illinois Legislative Charges

IMSA was established in 1985 by the Illinois General Assembly as part of the State's comprehensive educational reform package to address the critical need for citizens highly skilled in STEM fields. The Academy opened in 1986.

IMSA is governed by an appointed Board of Trustees and is funded by the Illinois legislature under the Illinois Board of Higher Education appropriation.

Legislative Charge #1

To provide an advanced academic and residential program for students of exceptional talent in mathematics and science.

Legislative Charge #2

To serve others as a catalyst to stimulate teaching and learning in mathematics and science throughout Illinois.
“IN2” is a highly conceptual name that plays upon the idea of both innovation and inquiry—bridging businesses and the educational focus at IMSA. It also extends the current name assets at IMSA, metaphorically extending the mission.

It plays on the concept of bringing both innovation & inquiry into practice at IMSA and on the concept of what is put “into” the center to make things happen—ideas, intuition, exploration, knowledge, experimentation, etc.

It is short, memorable and easy to say. It leaves room for curiosity and play without having to explain too much.

The three lines composing the “2” represents the different journeys of students through time and the paths that come together at IMSA through innovative practices, inquisitive learning, and problem-solving processes.

3D walkthrough
In2 timeline

2014
2015
2016
2017

- design
- naming/branding
- fund raising (private)
- (public 2016 and beyond)
- construction
- awareness

Open/evolves
Where did we start?

1. 2007 IMSA Strategic Plan
2. CoolHub
3. The Gift
4. PB&J Innovation Brown Bag lunch
5. IN2 Advisory Committee (adults)
6. Select Architects
and then what?

7. Design Charrette
8. Intersessions (3)
9. Design Process
10. Maker Squad
11. IN2 Advisory Committee (Students)
12. Naming/Branding
13. Programming
14. Fundraising
15. Job Descriptions, hiring and onboarding
16. Order equipment & prepare to open
17. Develop MVP
18. Open (fall 2016)
Design Charrette
August 2014
seek inspiration

1871
Silicon Valley (Facebook, Twitter, Dropbox...)
State Farm Next Door (industry)
Chicago Public Library (Maker Space)
IIT Idea Lab
CIE – Chicago Innovation Exchange
MIT Media Lab (Boston)
Harvard Innovation Lab (Boston)
Northwestern University Garage
Greentown Labs (Boston)
Artists’ Asylum (Boston)
Purdue (Foundry & Anvil)
Chicago - DMDII
University of Illinois Research Park
Rockford & Peoria Innovation spaces
Silicon Valley

Twitter, Dropbox, Google, Avos, Exploratorium, Facebook, WeWork
Silicon Valley

Twitter

**Takeaways:** Internal hack days; branding; unique staff benefits;
Silicon Valley

Exploratorium

Takeaways:
Engaging; fun; applied learning; Manipulatives; peek behind
Silicon Valley

Google

Takeaways: teams; art inspired; edgey
Silicon Valley

Facebook

**Takeaways:** fun; mentoring; Creativity outlets; benefits
Silicon Valley

Avos

**Takeaways:** flexible open space; inexpensive options; toys & games; design and play with brand (colors)
Silicon Valley

Co-working Spaces (WeWork)

Takeaways: comfort; collaborative; amenity laden; membership; phone booths; café; office station
Boston

Harvard Innovation Lab

Oblong Technology

MIT Media Lab

Greentown Labs

Artists’ Asylum
Boston

Artists’ Asylum

**Takeaways:** whimsy; chaotic comfort; community; tool organization
Takeaways: Art integration, functionality, zones, social media, programming
Boston
HI – Harvard Innovation Lab – 10/1/14

Takeaways: Mobility, technology, experiential, community around food
Boston

Greentown Labs

Takeaways: focused vertical; sponsored community
Boston

MIT Media Lab

Takeaways: Teams; IP; hands-on; ingenuity
Regional

Thermo Fisher Scientific
Blue Waters Petascale Computing

Jump Simulation
Regional

Woodward Aerospace
Rockford, IL

University of Illinois EnterpriseWorks

Caterpillar Visitor’s Center
Peoria, IL
Chicago

IIT Idea Lab

DMDII

Northwestern
Local Business Incubator

Barrington High School

Aurora Public Library

Maker Space

“I want to teach older adults how to use technology”

Business Incubator
Barrington High School
Pillars & Programs

Teaching & Learning
- Development of credit bearing opportunities
- TALENT junior high external curriculum/PD
- Swanson Fund
- Social Entrepreneurship Initiative

Entrepreneurship Education
- eleMENT programs
  - MNL
  - Internships
  - Power Pitch
  - Online

Maker Education
- IN2 STEM Café (NIU)
- First Lego League
  (Quad County Urban League)
- Coding classes
- Teen STEM Café (NIU)

STEM Talent Pipeline
- Hackathon
- Drop-in Maker Hours
- Jordan Foundation Partnership (with PFS)

Energy Center
- Power Up!
- Green Apple DOS
- Seed Fund

Summer Camps
- Global Social Initiative (GSI)

Boot Camps
- Maker Club
- 3D Printing Workshops & Demos

Try-it-Tuesdays
- Student Maker Squad

IN2 STEM Mentors Series
- 1M Cups of Coffee
- Girls & STEM

Girls & STEM

IN2 @ IMSA
Funding

Revenue Streams
- Donations
- Memberships
- Sponsorships
- Program fees

Expenses
- Salaries
- Equipment
- Program supplies
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IMSA Innovation Spaces Tour

Grainger Lab
Grainger Workshop
IN2
Robotics Lab
IN1
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Maker Space Panel
(next door in IN1)

Lawrence “Bud” Bergie, IMSA COO
Britta McKenna, IMSA CIO
Erik Swanson, IN2 Maker Manager
3D printing online resources

- All Things Tech http://www.engadget.com/
- 3D Printing Industry Resource http://3dprintingindustry.com/
- NASA Summer of Innovation Site http://www.nasa.gov/offices/education/programs/national/summer/education_resources/#.Vqu7GbIrJaQ
- Open Education Consortium http://www.oecconsortium.org/2015/12/new-oecd-publication-open-educational-resources-a-catalyst-for-innovation/
- Innovation in Community College http://www.league.org/
- National Consortium for Entrepreneurship Education http://www.entre-ed.org/
- Autodesk http://www.autodesk.com/
- Solidworks http://www.solidworks.com/
- Rhino 3D http://www.rhino3d.com/
- Blender http://www.blender.org/
- TinkerCad https://www.tinkercad.com/
- FreeCad http://www.freecadweb.org/
- Sketchup http://www.sketchup.com/
- Slic3r http://slic3r.org/
- 123dDesign http://www.123dapp.com/design

...more presentations and articles at IMSA Digital Commons
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Q: Who came today with a specific space or idea to design?
How might we design a new space at our school to invite and enable innovation initiatives?

Key questions…

Who is your target audience and what do they want?
What do they (you) want to make or do?
What are your constraints?
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Join IN2 on social media...

IN2IMSA
IN2 (Group page)
IN2 (group)
imsa.edu/in2
Lessons from Sylvia...

1. Baby Steps
2. Cheap is Good
3. Failure happens
4. Be the student
5. Don’t sweat the small stuff