



## Innovation Incubators Attract Graphic Communications

*Designers and printers among businesses reviving Brooklyn landmarks*

■ Around the world, in cities including New York's borough of Brooklyn, municipalities and private institutions are creating innovation hubs in abandoned and underutilized manufacturing and warehousing buildings, navy yards and other landmark locations. With a mix of enterprises from a variety of industries and business sectors including graphic communications, they foster a sense of community and cross-pollination of skills and expertise that drives growth and innovation.

Inspired by an April 2018 Forbes article by Michelle Greenwald<sup>1</sup>, this article examines the role of design and print at five innovation centers in New York City's borough of Brooklyn: the Industry City neighborhood, the Brooklyn Navy Yard, the Greenpoint-Williamsburg area, the Pratt Institute's Brooklyn Fashion & Design Accelerator in the Clinton Hill neighborhood and New York University's (NYU) Tandon School of Engineering,

which is housed in an industrial building near the Brooklyn Bridge.

### Industry City

Industry City, i.e., Brooklyn's "Design and Innovation Districts" is home to over 450 businesses.

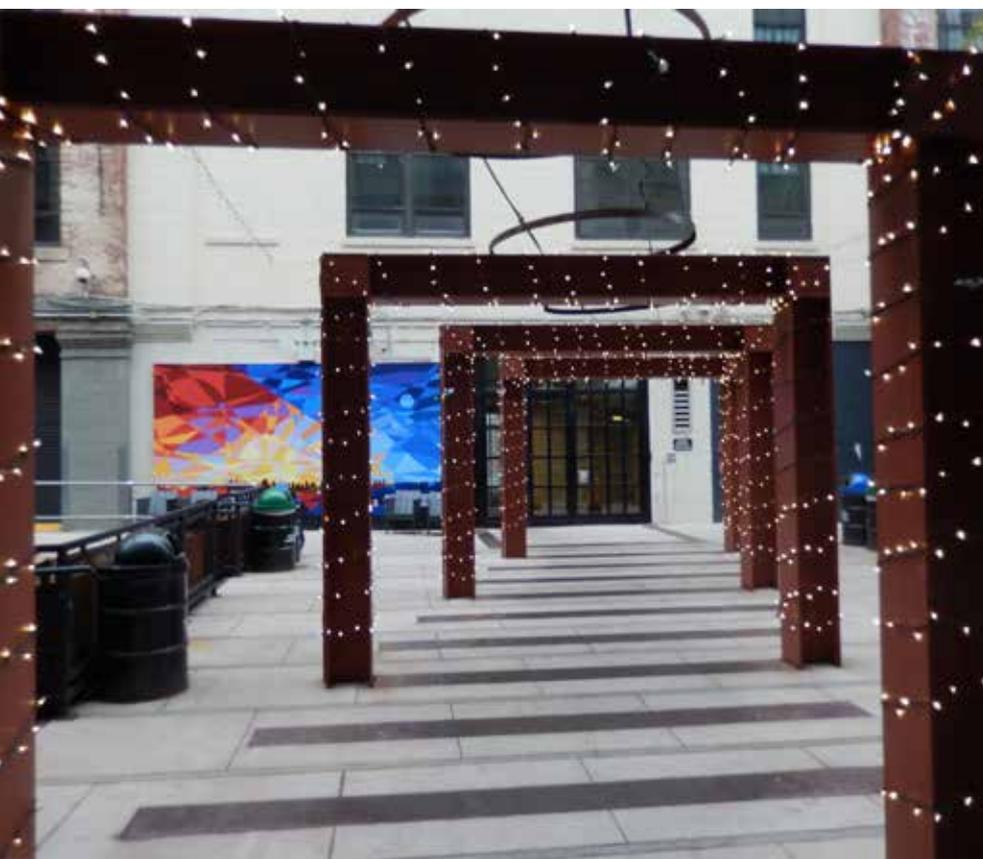
Its predecessor, Bush Terminal in the Sunset Park neighborhood of Brooklyn, dated back to the 1890s, a multi-building hub for manufacturers, distributors and warehouses that eventually employed over 24,000. Its proximity to the adjacent Brooklyn seaport helped to establish its piers as an international shipping destination. But as container shipping and its requirements led to the decline of the Brooklyn piers — and urban manufacturing began declining in the 1960s — businesses abandoned the Brooklyn complex. In 2013, developers came in to revitalize what's now called Industry City.

Today, Industry City includes 18

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By Vince Cahill, Owner, VCE Solutions



A passage between buildings in Industry City



Industry City Flavor Paper proprietary wallcovering design

buildings — 6 million square feet of workspace — over 35 acres. Its resident companies employ about 7,000 workers involved with design, engineering, development and manufacturing of products including printing. It houses studios for about 100 artists, about an equal number of design and architecture companies, almost 50 media companies, and about 80 production and manufacturing companies. Industry City also serves the neighborhood, with restaurants, shopping and entertainment.

Flavor Paper's ([flavorpaper.com](http://flavorpaper.com)) Industry City location digitally prints wallpaper. (Its Pacific Street location also screen prints wallpaper). The company offers a large design portfolio, including proprietary designs for customers to have printed on their wallpaper and customer-supplied designs. The Andy Warhol Foundation licensed Flavor Paper to reproduce Warhol designs on its GLAMERICANA wallpaper collection, and Flavor Paper printed the wallcovering for the Whitney Museum's recent Warhol retrospective exhibition. The company partners with furniture designer and manufacturer UM Project of Greenpoint, Brooklyn, to produce interactive wallcoverings using screen printed conductive ink touch points that activate sounds, lights and motions that enliven an environment with color, music and movement.

Creativo Surface Design Studio ([thinkcreativo.com](http://thinkcreativo.com)) is one among the many design companies at Industry City. It provides prints and patterns for the apparel, home furnishing, T-shirt, gift and paper goods markets. Alexandra Ortiz directs the company's creative team of two in-house designer illustrators and over 10 designers from around the world.

Industry City formed and promotes The Collision Project ([collisionproject.com](http://collisionproject.com)), "a diverse and flexible testing ground for artists and visionaries of all disciplines to collaborate and discover at Industry City." The Project promotes the collaboration of the campus's artists, designers, academics, entrepreneurs and manufacturers to "facilitate and activate new areas of co-creation." It provides the campus's public space "as [a] test site, interactive lab, and exhibition gallery dedicated to the visual manifestation of an intersection of ideas."

### Brooklyn Navy Yard

After 150 years of building ships there, the U.S. government closed the Brooklyn Navy Yard in 1966. Plans for

an automaker to take over the site did not come to fruition and the buildings remained little used. The city of New York acquired, managed and developed the site over time. Steiner Studios, the largest cinema production studio in the northeast United States, moved into the yard in 2003. Since then, over 300 businesses of various specialties established operations in the Navy Yard. They include designers, printers, artists, crafts, manufacturers, metal fabricators, coffee roasters, food producers, a brewery, a whiskey distillery and rooftop farm and vineyard. The Yard houses the City University of New York (CUNY) Feirstein Graduate School of Cinema, and the New Lab, where about 100 developers of advanced technologies, including robotics, artificial intelligence and nanotechnology, have set up shop.

Several printing companies operate at the Yard, adding their expertise to the mix of innovators and manufacturers. Among these are Duggal Visual Solutions, Abby Lichtman Design, ARES Printing & Packaging, Arplast Corp., Mullin Studio, Roboto.NYC, and Woodside Press aka Briar Press.

Duggal Visual Solutions (duggal.com) incorporated in 1963. In addition to its corporate offices at the Brooklyn Navy Yard, it has a retail space on West 24th Street in Manhattan and operations in Portland, Ore. It occupies parts of five buildings at the Navy Yard. Duggal provides photographically and digitally printed visual images, custom displays

and multimedia solutions. Its customers include major retailers and corporations, museums, galleries, photographers, artists and designers. It operates round-the-clock and ships worldwide. The company has 30 wide-format digital printers with print widths of 60 inches or greater. It also boasts an HP Indigo 12000 B2 digital press.

Abby Lichtman Design (abbylichtman.com), founded in 2012, is a print studio that provides fabric designs for the apparel and home décor industries. Its clients include major brands and retailers such as Carolina Herrera, Etro, Oscar de la Renta, Milly, Sachin + Babi, The North Face, Target, Athleta, Macys, Belk, TJ Maxx/Marshalls and J.C. Penney. Its founder and CEO, Abby Lichtman, and her design team report creating about 50 to 75 unique print designs weekly.

ARES Printing & Packaging (aresny.com) describes itself as a manufacturer and designer of paperboard, E-flute & B-flute, folding cartons and point-of-purchase (POP) displays since 1979. The company provides advanced package engineering, design development, printing and production at its Brooklyn Navy Yard location. ARES reports to have the two largest sheet-fed printing presses in New York state: a seven-color Planeta 44-by-64-inch press and a six-color Roland 40-by-56-inch press, both of which have in-line tower coaters. ARES offers CAD/CAM computer design and sample making, digital and conventional proofing. It provides a pre-



Entrance to Building 77 in Brooklyn Navy Yard



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## Mapping Brooklyn's Innovation Incubators



press department featuring a step-and-repeat imposing system. It offers multi-color printing, in- and off-line coating, hot leaf stamping, die cutting, windowing, embossing and flute lamination. ARES has been a leader in adopting environmentally considerate and sustainable production systems, printing exclusively with non-solvent water-based inks, coatings and finishes, and proclaims its commitment to sustainability.

Arplast Corp. ([arplastpolybags.com](http://arplastpolybags.com)) prints and produces a wide variety of plastic bags.

Mullin Studio ([mullinstudio.com](http://mullinstudio.com)) is the workplace for Emily and Tony Mullin. Since 2010, they have custom

designed, printed and fabricated sets and props for retail, promotion, corporate and commercial settings. They provide custom fabrication, 3D milling, 3D printing, laser cutting, vinyl printing, casting, graphic design, decorative painting and on-set styling. Their clients include retailers Barneys New York, MoMA Design Store and Bloomingdale's; magazines such as Brides, Teen Vogue and Real Simple; and brands such as HP, Hennessy, Rubbermaid and Warby Parker.

Roboto.NYC ([roboto.nyc](http://roboto.nyc)) is a light fabrication service specializing in 3D printing, 3D scanning, laser marketing and cutting, CAD, and model making. Co-founders Alijosa Kemperle and

Robert Steiner were former MakerBot employees who set out on their own to create opportunities for their customers, including retailers, museums, galleries, engineers and artists, to cost-effectively design and execute displays, replicas, art objects, prototypes and parts.

Woodside Press ([woodsidepress.com](http://woodsidepress.com)) is a letterpress printing company. Woodside Press offers customers the use of hundreds of metal and wooden typefaces and classic ornamental material. It also offers hot-metal casting of fonts and ornaments.

### Williamsburg & Greenpoint

The Williamsburg and Greenpoint neighborhoods — adjacent to each other

— had large industrial buildings that were vacated and became available to Brooklyn and New York City’s creators, entrepreneurs and innovators. As with the Brooklyn Navy Yard and Industry City, the buildings that past industries abandoned became opportunities for incubating the next waves of innovation.

At the AATCC-SGIA Digital Textile Printing Conference in Durham, N.C., in December 2018, Mark Sunderland of Thomas Jefferson University spoke about the digital dye sublimation prints that his students used to decorate parts of shoes they made at the Brooklyn Shoe Space in Brooklyn’s Williamsburg section.

Adidas built its Brooklyn Creator Farm with a designer area and a MakerLab in a renovated Greenpoint warehouse. The design space serves Adidas designers from studios around the world, with designers from Germany and Portland, Ore., complementing a resident design team. The design space configuration and culture encourage collaboration. Its MakerLab, one of three that Adidas operates, contains the machinery and materials needed to transform the designers’ ideas and designs into shoes and apparel.

The Richemont Group (Cartier & Van Cleef & Arpels) established a creative design studio in a renovated office building in the area. VICE media (vice.com), a \$4 billion media brand, produces news, information and entertainment and employs about 1,000 at its 75,000 square feet of studios and 125 video-editing suites in the former home of Domino Sugar in Williamsburg. Colossal Media (colossalmedia.com), which reports to be the largest global producer of hand-painted outdoor advertising and mural art also resides in a revitalized Williamsburg factory structure.

### Brooklyn Fashion + Design Accelerator

The Pratt Institute’s Brooklyn Fashion + Design Accelerator (BF+DA) (bkaccelerator.com) resides on the seventh floor of a former Pfizer pharmaceutical laboratory and production facility, between the Bedford-Stuyvesant and South Williamsburg neighborhoods.

Pratt promotes BF+DA as “a hub for ethical fashion and design that provides design entrepreneurs, creative technologists and industry professionals with the resources they need to transform their ideas into successful, triple bottom line businesses.” (Triple bottom line business is an accounting framework that includes social, financial and environmental components.)

BF+DA provides its students, Venture and Research Fellows, and its clients and members the use of the production, research, conference and workspaces.

According to its website, BF+DA annually serves over 300 digital fabrication and 70 apparel production clients, as well as over 4,000 attendees at events, tours and educational programs. It lists its functions to include business mentorship, sustainable strategies consulting, materials sourcing, small-run apparel production, no-minimum computerized knitting services and digital fabrication services.

Executive Director Debra Johnson underscored the role of BF+DA as a research hub where ideas develop to commercialization.

The Venture Fellow program provides structured mentoring for creators of budding fashion, design, accessory, home furnishing and technology businesses, choosing 15 emerging design business founders — not limited to Pratt alumni — to work at BF+DA as either full-time resident Venture Fellows mentoring students or research fellows. BF+DA instituted a membership program to advance the creation of a designer community and sustainability consulting. Membership in BF+DA provides access to its online Sustainable Fashion Roadmap tool, a self-guided tour of sustainable design strategies for apparel.

During an in-depth tour of the facility, Johnson emphasized BF+DA’s commitment to advancing sustainability and the need for investment in the fashion industry. “It takes money to get things done,” she noted.

Through its Sustainability Lab, BF+DA develops metrics and strategies for determining and affecting sustainability. Johnson

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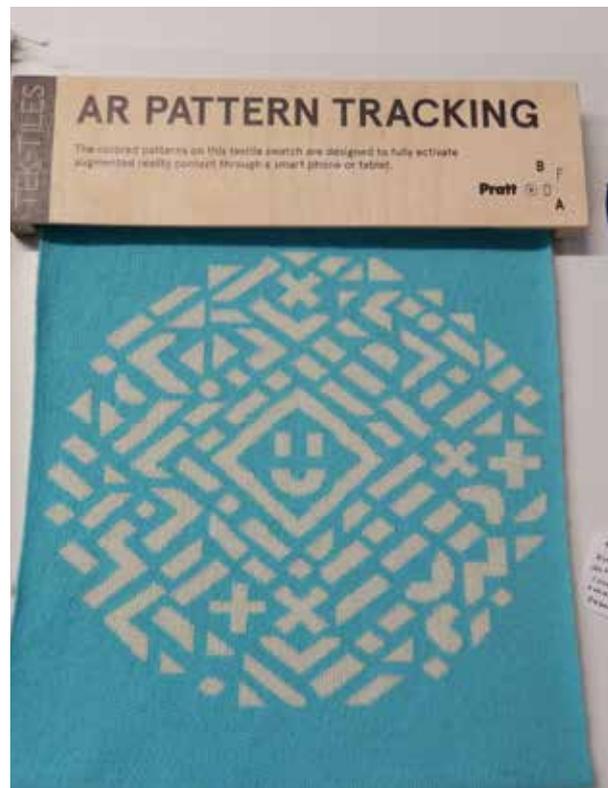
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Thermochromatic Yarn and AR Pattern Tracking fabric. Courtesy of Brooklyn Fashion + Design Accelerator.

noted that companies and brands that invest in adopting a sustainability program “need to understand how to measure and value it,” and see strategies for implementing it. BF+DA helps clients learn to do it. She asserted, “Technology is going to get us to sustainability.”

Johnson posed BF+DA’s educational challenges, “How do we provide smarter people with integrity, a model for what the nation should be doing.” BF+DA works cooperatively with other educational institutions including Cornell University, NYU, North Carolina State, Oberlin College and Parsons School of Design.

When it comes to educating designers, Johnson said, “How do you put gravity around ideas? By touching what you are learning.” At the Cut-and-Sew and Knit sections of its Production Lab, students, Fellows and clients touch and process into prototypes, samples and short runs of what they have designed. Johnson showed the Accelerator’s 3 Shima Seiki knitting machines, HP inkjet wide-format printer, weaving devices, and cutting and sewing equipment. She also displayed many examples of weaving and knitting innovations, including 3D knitting and weaving conductive circuits into fabrics — some with body function sensors, some with LED lighting, and some with heating elements.

Johnson said that the role of BF+DA was not abstract, but one of putting knowledge into practice and “not trying to sound smart, but trying to get things done.” She recalled the words of a role model educator who would greet incoming design students with what awaited them in the charge of their chosen field to strive for continuous improvement: “Welcome to industrial design. You will never be satisfied again.”

### Conclusions

Brooklyn has become a center for incubator hubs where innovators create, communicate, cooperate and cross-fertilize ideas into products and solutions for the next waves of innovation. The borough, entrepreneurs and educational institutions are renovating abandoned and underused industrial buildings and reviving them with innovative designers, printers, technology developers, and new industries and businesses. Designers, printers and 3D additive manufacturers are a vital part of this mix.

Innovation incubators can be found in other locations in Brooklyn and the other boroughs of New York City. NYU maintains an engineering innovation center at the above-mentioned NYU Tandon School of Engineering, located in a revived Brooklyn industrial building. In

Manhattan, the Impact Hub New York on lower Broadway offers workspace and more for innovators, as does MasterCard NYC Tech Hub on the edge of the Chelsea neighborhood. Pepsico has a design and innovation center in SOHO for developing new ideas, many of which involve print, for its brands. At the Museum of Art and Design at Columbus Circle, one floor houses a rotating workshop and exhibit of innovative graphic artists and designers. The list of innovation centers in New York City runs on. In almost all of these innovation hubs, 2D and 3D print imaging and design provide essential ingredients for the success and growth of innovation.

### References

<sup>1</sup>Greenwald, Michelle. “A New Wave of Innovation Hubs Sweeping the World,” *Forbes.com* (April 2, 2018).

*Vince Cabill began screen printing in 1969, eventually managing an operation in Frederick, Md., and establishing The Colorworks, a custom screen printing business with his wife, Claire Hunter, which they sold in 2008. In 1995, they established VCE Solutions, a print consulting business. In 2003, they formed Industrial Printing Solutions to distribute digital printers.*