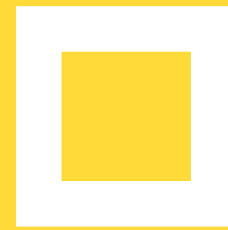


Flad Architects



FLAD ARCHITECTS





Syngenta

Martin Allen Agronomic Traits
George Aux Operations Team, Product Safety
Jen Ball Attorney
Esteban Bortiri Agronomic Traits
Eric Boudreau Corn Products Manager
Buddy Bowman HSE Manager
Matt Bramlett Biostress Traits, Team Leader
Pam Bullock Communications
Ryan Carlin Molecular Analytics
Grace Carter TSI

Stacy Charlton Regulatory Affairs
Jingwen Chen Quality Management
Bobby Clegg Greenhouse Operations Lead
Nancy Comento Admin Support, Site Operations
Jared Conville Biostress Traits, Insectary
Greg Crabb Agronomic Traits, R&D Team Leader
Rick Dail Site Services
Mack Davenport Global Portfolio Manager
John Dawson Crop Transformation
Lucio Garcia Molecular Biologist
Chip Griswold Manager of Operational Excellence

Sally Harris Human Resources Administration
Pablo Hernandez North America R+D Infrastructure Manager
Bill Hlavac R&D Infrastructure Strategy and Investment
Jamie Huang Plant Analysis
Traci Hughes Paralegal
Chris Jones Project Management Excellence – Biotech
Laura Kavanaugh Bioinformatics
Vance Kramer Molecular Biologist
Erik Legg Molecular Biologist
Brooke Ledford Operations Team, Product Safety
Mi Lee Plant Analysis

Kevin Leiner Product Safety
Chris Leming Patent Agent
Butch Lovell Business Services, IS Department
Carol Marino Vice President, Syngenta Ventures
Chris Martin Bioinformatics
Dawn McNamara Greenhouse
Jim Mellon Global Portfolio
Karen Moore Group Classes
Karen Moore Molecular Analytics
Bette Anne Newsome Human Resources Manager
Derek Norman Syngenta Ventures
Makoto Ono Regulatory Affairs
Jason Peters AV, Conference Room Manager
Qiudeng Que Crop Transformation
Bob Richmond Facilities Manager
Barbara Roberts Admin Support, TSI
Kelly Rupczyk Finance Support
Glenn Spehar Molecular Analytics
Chris Tutino Communications
Michiel van Lookeren Campagne Head, Biotechnology
Kim White Molecular Analytics
Andreas Wobmann Finance
HP Zhou Greenhouse

Flad Architects

Architect
 Structural Engineer
 Landscape Architect
 Interior Designer

Chuck Mummert Design Principal
David Alder Project Manager
Julia Janaro Project Architect
Michael Nagy Lead Lab Planner
Karen Fraker Architect
Melinda Sanes Architect
Jasmine Griggs Architect
Randy Schmitgen Interior Design Principal
Cody Axness Landscape Architect
Paul Pietruszka Structural Engineer

20 Below Studio

Interior Design Partner
 Finishes, Furniture and Branding

CRB Consulting Engineers

Mechanical, Electrical, Plumbing
 and Fire Protection Engineers

Stewart

Civil Engineer

Stewart Design Associates

Servery and Kitchen Consultant

Carolina Specialty Engineering

Fire Protection and
 Smoke Exhaust System Consultant

Schuler Shook

Lighting Consultant

PCI

Commissioning Agent

Ramey Kemp & Associates

Traffic Engineer

Mulford Cost Management, LLC

Cost Consultant

Peg Contractors

Owner's Representative

LeChase Construction

General Contractor



Syngenta
RTP Innovation
Center

“I think the building is an impressive structure, a stimulating and inspiring environment to be in. People are proud and enthused to come to work in a world-class facility.”

Ian Jepson,
Site Head at Syngenta
RTP Innovation Center



In stark contrast to traditional corporate research facilities, the level of transparency and openness at the Syngenta RTP Innovation Center announces the presence of an integrated campus supportive of a dynamic interactive culture.



At a time in history when each day brings 200,000 more mouths to feed, Syngenta's workforce provides farmers with everything from genetically engineered seeds that withstand the effects of drought and cold to products that prevent devastating insect infestations – tools to help achieve global food security.

Architecture that allows our brightest minds to focus on the future.

Innovation Center
207,000 GSF
SPATIAL PROGRAM

75% Collaborative Space
Comprises 75% of
the RTP Innovation Center

open office
56,555 NSF

open lab
21,840 NSF

huddle rooms
5,065 NSF

amenity
16,820 NSF

lab support
25,600 NSF

PROJECT
RTP Innovation Center

CLIENT
Syngenta

PROJECT OBJECTIVE
Collocating staff from multiple disciplines and separate locations



LOCATION
Research Triangle Park NC USA

CLIENT MISSION
Bringing plant potential to life for a growing global population in need of food security through agricultural innovation in an environmentally sustainable way.

PROGRAM COMPONENTS

GREENHOUSE / PHASE 1
Advanced Crop Lab 136,000 GSF

RTP INNOVATION CENTER / PHASE 2
Research 139,100 GSF
Admin / Atrium 67,900 GSF
Security Gatehouse 1,130 GSF
Central Utility Plant 15,100 GSF
Data Center 1,110 GSF

Syngenta RTP Innovation Center

A catalyst for scientific interaction, the RTP Innovation Center is designed to harness the collective power of interdisciplinary collaboration, reflecting the vitality of teams that reach across all aspects of the research and development pipeline.

Global growth

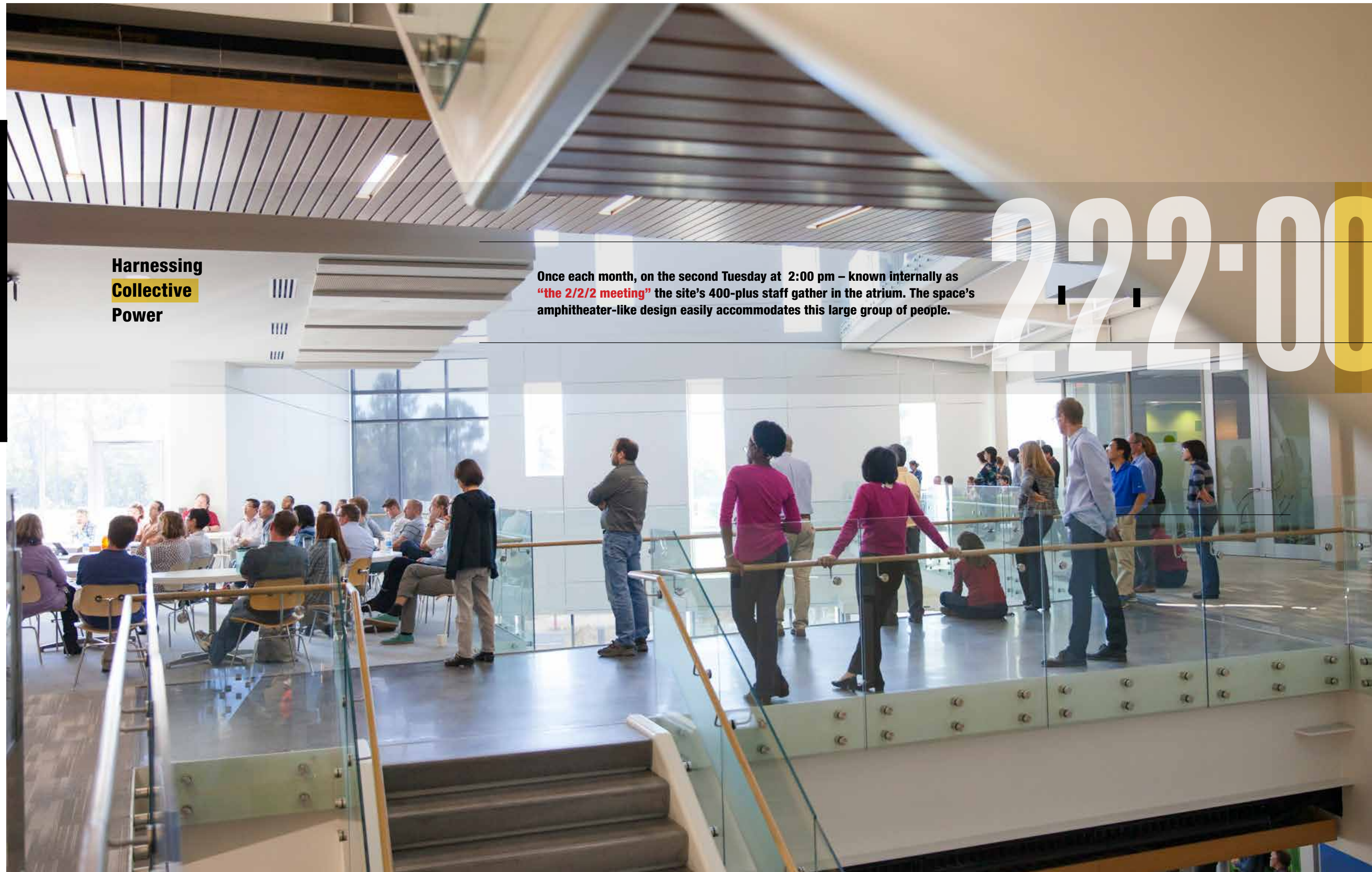
Occupied with small components such as seeds and plant tissue, and even smaller obstacles to global agricultural growth such as insects, fungus and nematodes, Syngenta's researchers nonetheless have an outsized impact on the world's fast-growing population.

Applying world-class science to address the earth's biggest agricultural challenges requires world-class facilities that can support the changing needs of scientific research. Syngenta focuses on six distinct areas of research, but its scientists work together across their various disciplines to achieve optimum results. This multidisciplinary approach requires labs and administrative suites that enable and encourage interaction, linking employees in the same way that research outcomes and corporate goals are linked.

Harnessing Collective Power

Once each month, on the second Tuesday at 2:00 pm – known internally as “the 2/2/2 meeting” the site's 400-plus staff gather in the atrium. The space's amphitheater-like design easily accommodates this large group of people.

2.2.2.00



A REINVENTION OF THE AGRICULTURAL BIOTECHNOLOGY RESEARCH ENVIRONMENT

IN PURSUIT OF SOLVING THE CHALLENGES OF GLOBAL FOOD SECURITY, THE TEAM HAD TO COMPLETELY **RETHINK** THE TYPE OF FACILITY NEEDED TO ACHIEVE SUCCESS. TRANSITIONING FROM THE SILOED, STATIC CORPORATE LABORATORIES OF THE PAST REQUIRED A COLLABORATIVE APPROACH TO PLANNING AND DESIGN.



“Exploring Syngenta’s goals for new ways of working and collaborating was a foundational component that guided every decision throughout the process.”

Charles Mummert
Principal
Flad Architects

“Throughout the series of PET meetings, we got a lot of responses, particularly from the research side, that helped the design team refine the building plan.”



“We were fortunate to work with a highly engaged group of stakeholders throughout the design process. The relationships and concepts developed during that time are evident in a workplace environment built to their culture but adaptable to future needs.”

Julia Janaro
Project Architect
Flad Architects

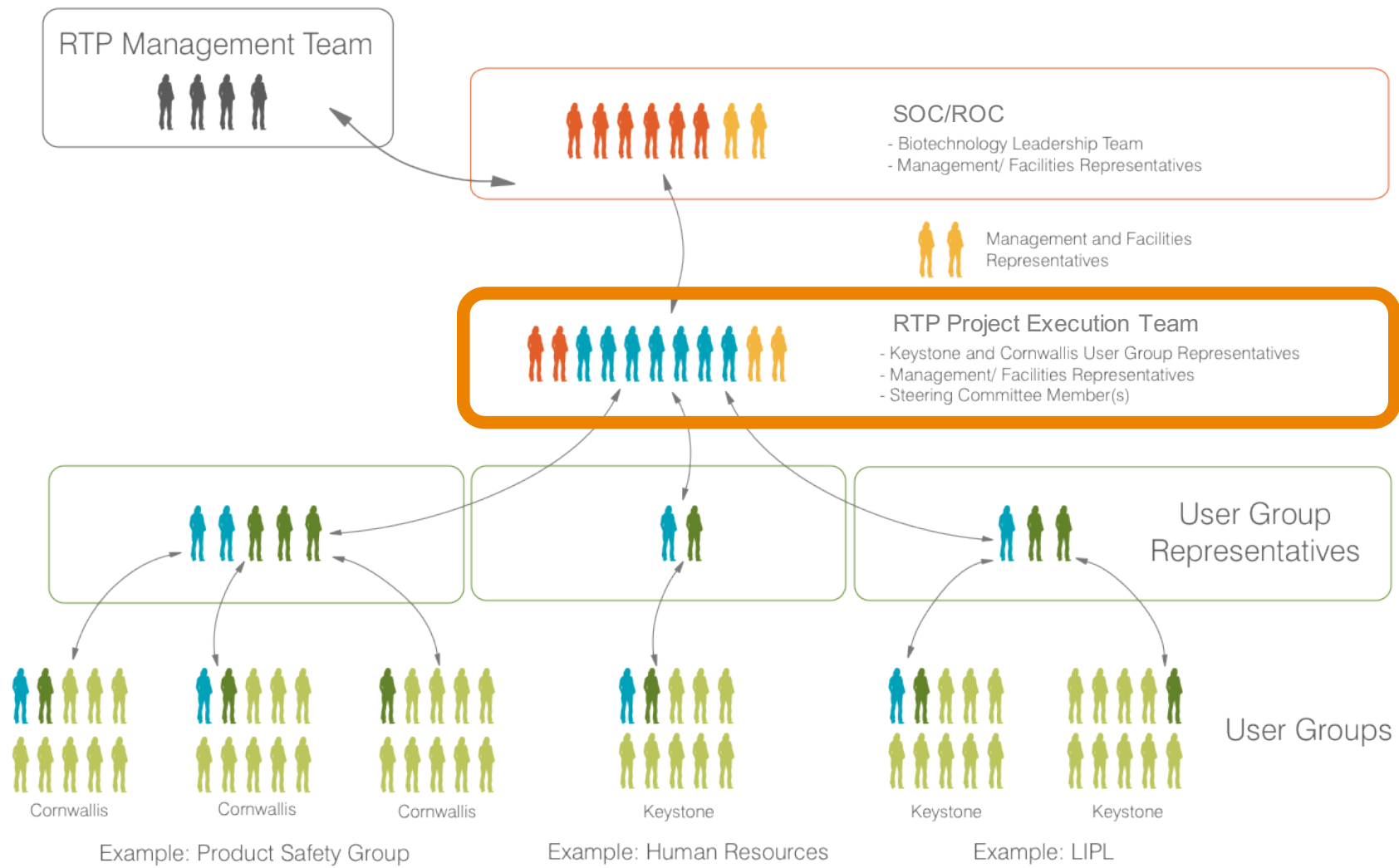
W o r k i n g t o g e t h e r

Flad engaged multiple tiers of stakeholders, including an executive-level management team comprising leadership in biotechnology, management and facilities, and the larger project execution team (the PET group). The latter group included more than 100 people representing each of the divisions to be collocated in the new campus development on 9 Davis Drive in Research Triangle Park, NC.



Michael Nagy
Senior Associate Architect/
Laboratory Planner
Flad Architects

working together



PET group participants served as advocates for their respective divisions and each were tasked with being the eyes and ears of their particular group at planning meetings. Highly engaged from the beginning of the process, they communicated directly with the design team and helped ease Syngenta's cultural transition from a siloed and enclosed workplace to an open and collaborative work environment.



The design team made communication a priority, establishing office hours in Syngenta's Keystone facility, where plans and programmatic documents papered the walls and could be reviewed by all employees in all departments. Periodic town hall updates, executive summaries and e-updates of project milestones enabled everyone to stay informed.



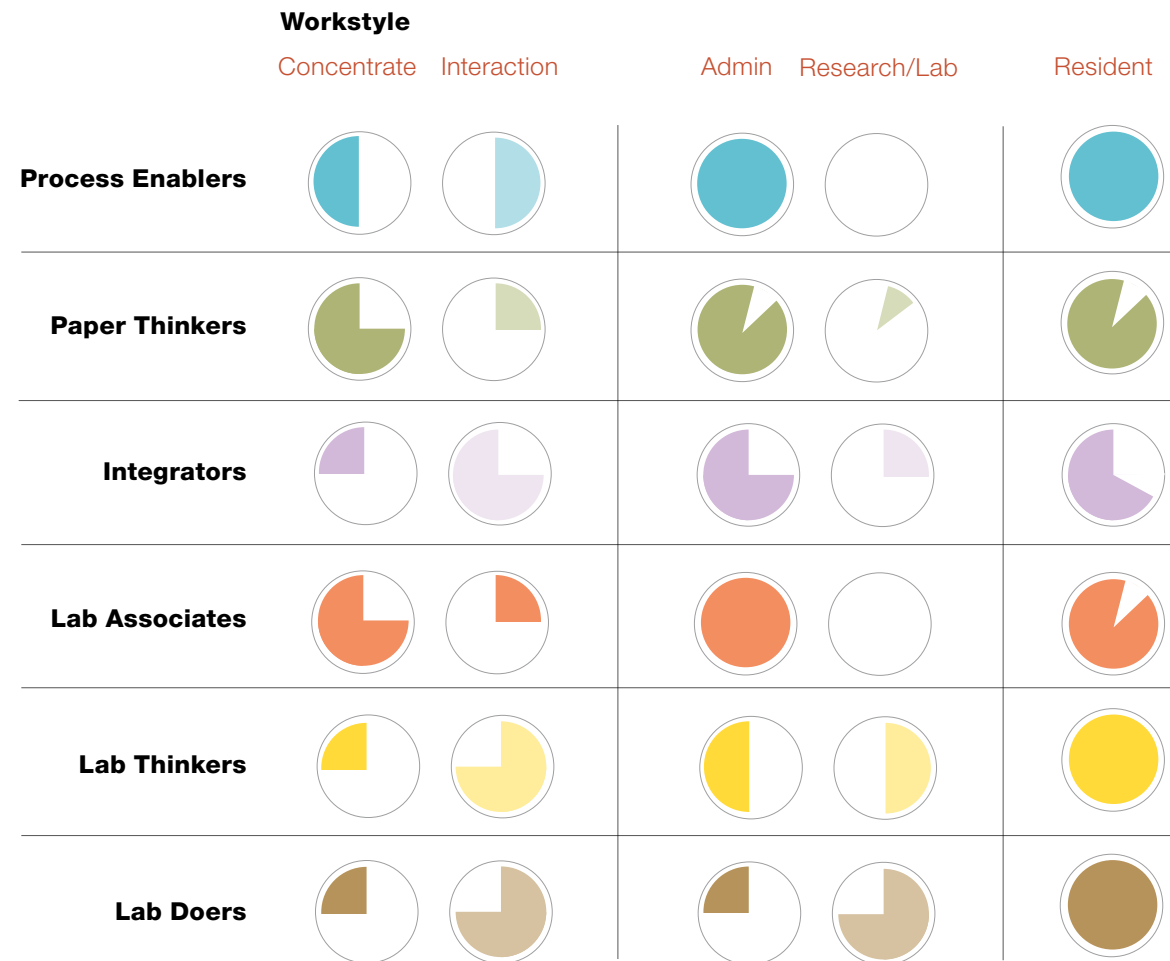
working together

Workplace Analysis

To understand the ways people work, Syngenta's staff were surveyed to determine the equipment that different types of workers needed to access and what kind of environment they required to do their work effectively. The design team's analysis pointed to six distinct categories of worker –

Process Enablers, Paper Thinkers, Integrators, Lab Associates, Lab Thinkers, and Lab Doers

– each corresponding to a profile of what types of space they needed to be successful in their work. These categories directly influenced the way the team thought about the development of neighborhoods for the different groups.



For example, “Lab Doers” spend most of their time in the lab itself and use their workstations sparingly. They can be located in more active, open areas and benefit from access to small ad-hoc and collaborative rooms.

“Lab Thinkers” need to be tucked away, out of the main path of travel, where there is more visual and acoustic separation. They have access to some of the unassigned, office-sized rooms that no one owns — for example, if writing a grant, they can commandeer a room for several hours or a day to do their work.

Finally, “Lab Associates” are closely tied to lab user groups, but don't work in labs. Their computation, verification, and analysis work requires them to be “heads down” and thinking 50 percent of the time, with a heavy need for computer technology and rooms that offer opportunities for frequent face-to-face collaboration.

ACTIVITY SETTINGS

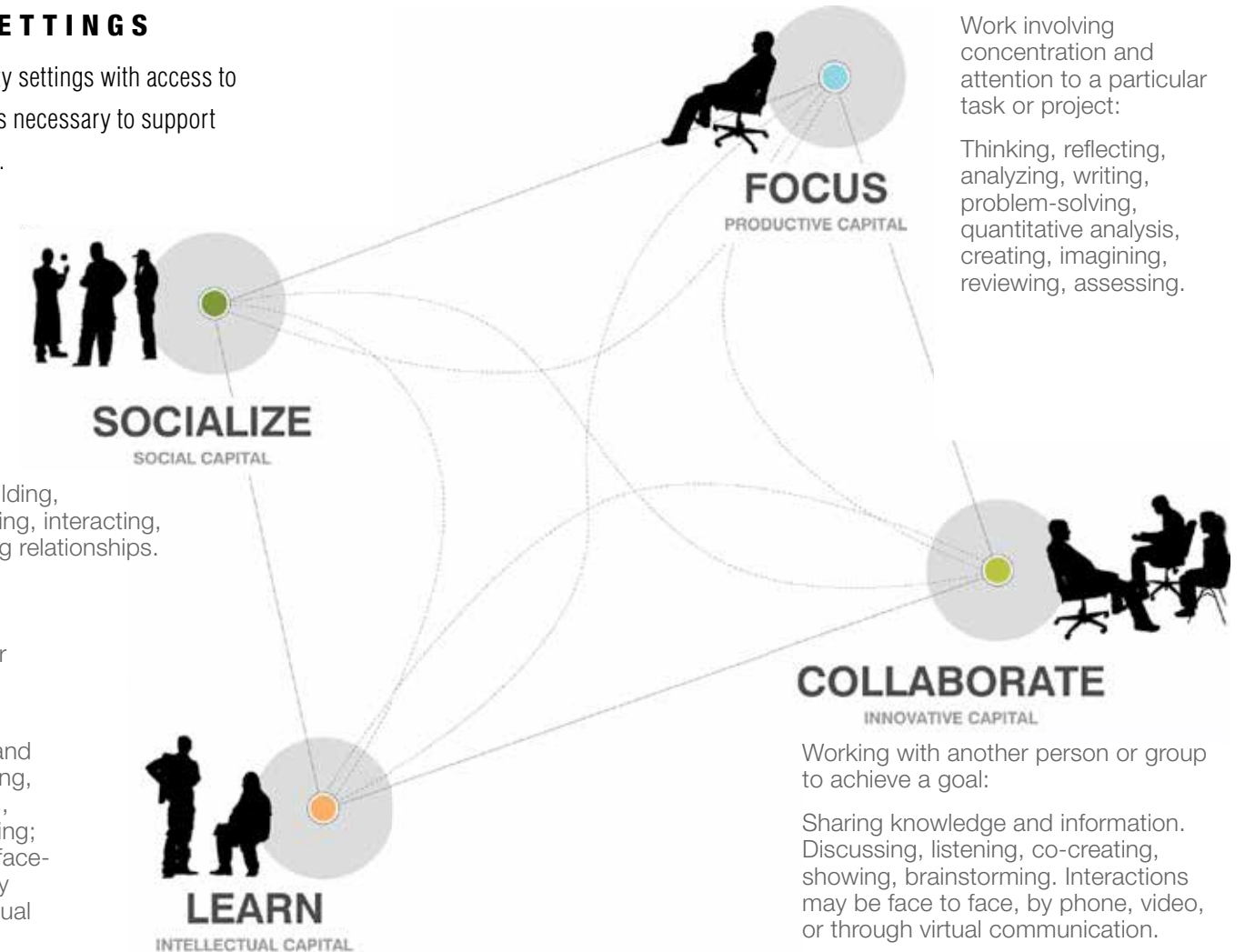
Provide multiple activity settings with access to various types of spaces necessary to support various modes of work.

Work interactions that create common bonds and values, collective identity, collegiality and productive relationships:

Talking, laughing, networking, trust-building, recognition, celebrating, interacting, mentoring, enhancing relationships.

Working with another person or group to achieve a goal:

Sharing knowledge and information, discussing, listening, co-creating, showing, brainstorming; interactions may be face-to-face, by phone, by video, or through virtual communication.



Work involving concentration and attention to a particular task or project:

Thinking, reflecting, analyzing, writing, problem-solving, quantitative analysis, creating, imagining, reviewing, assessing.

COLLABORATE
INNOVATIVE CAPITAL

Working with another person or group to achieve a goal:

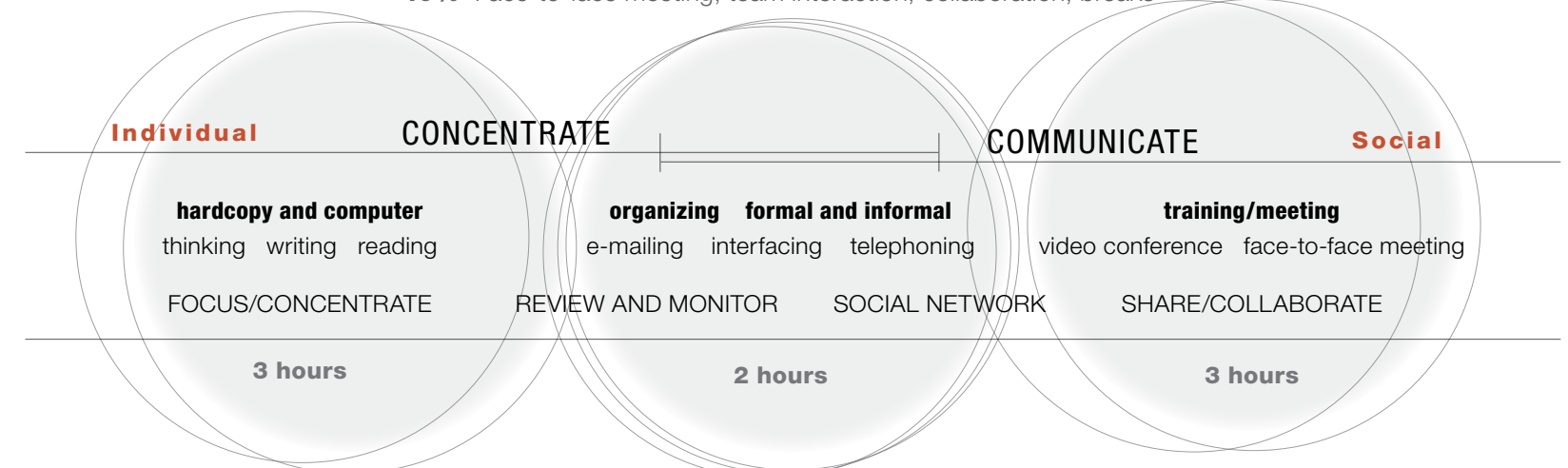
Sharing knowledge and information. Discussing, listening, co-creating, showing, brainstorming. Interactions may be face to face, by phone, video, or through virtual communication.



ACTIVITY ACROSS 8 HOURS

General Activity

- 35%** Thinking, reflecting, reading, writing, private computer work, individual work
- 25%** Communication – phone, email, virtual (not face-to-face)
- 40%** Face-to-face meeting, team interaction, collaboration, breaks



Neighborhood Organization

Workplace Analysis

working together

The Innovation Center represented a complex organizational and planning process, with many different people involved, because the building itself, and the work that it makes possible, are complex. Syngenta not only wanted to shift multiple departments to one site, raising programmatic and adjacency concerns, the organization also wanted to implement a fundamental change in the way that work was accomplished, both in the laboratory and administration areas.

The resulting plan largely abandons the idea of singly assigned, enclosed offices, with floors broken down into a series of neighborhoods that correlate to their different working groups. Neighborhood spaces include ad hoc rooms, quiet areas, and team spaces that support different clusters of teams or groups, all of which maximize collaboration and promote discovery.

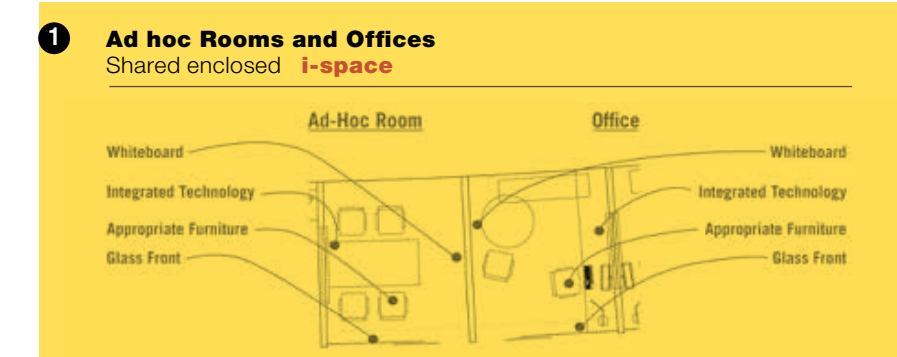
Finding the correct distance between spaces for concentration and communication = gained productivity

Many of the hallmarks of the building — no assigned or customized spaces, but rather spaces that will accommodate users of the future; a mix of workspace choices that make the entire building a workplace — boost its appeal to millennials and are an outgrowth of the push to design to broader “ways of working.” Space wasn’t designed or programmed for specific departments or individuals, but rather were aligned with what kinds of tools and space people need to do different kinds of work.

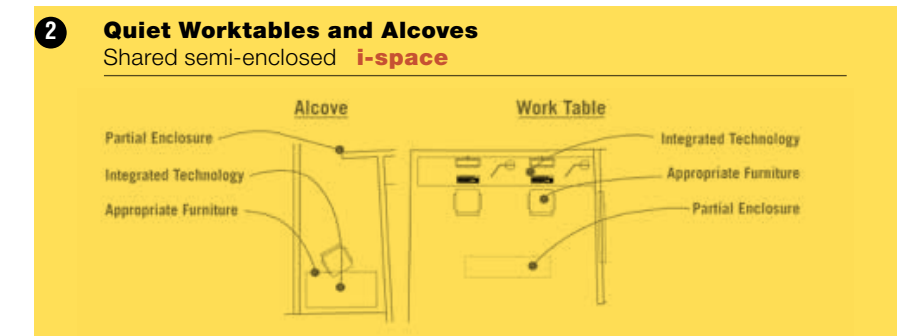
WORK TYPE

owned private workstation | shared neighborhood support spaces

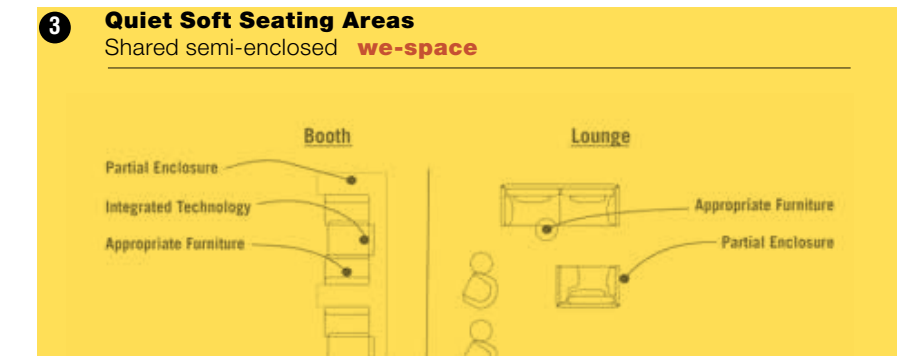
- Process Enablers
- Paper Thinkers
- Integrators
- Lab Associates
- Lab Thinkers
- Lab Doers



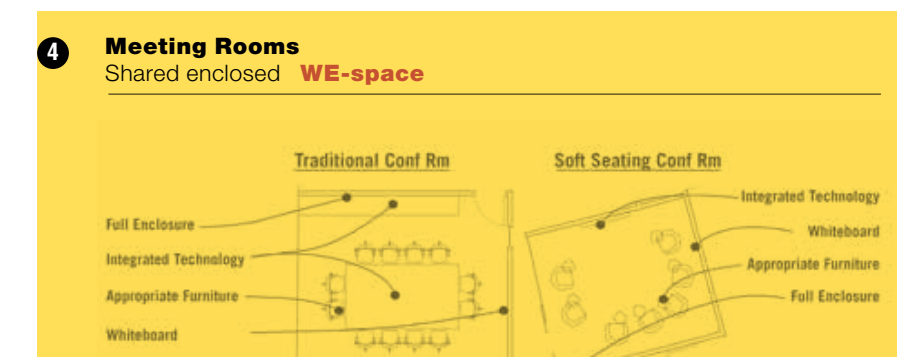
i space
individual



we space
small group
3-4 people



WE space
large group
6-12 people



community space
large group
more than 12 people

E

Syngenta's plan had always been that the firm's people and capabilities from around Research Triangle Park would be gathered on the new 50-acre campus, and the decision had been made, because of a shortage of available greenhouse facilities, to build the 136,000-square-foot Advanced Crop Lab first.

N

NORTH

Future Location of Innovation Center (Phase 2)

S

SOUTH

W

PHASE ONE

Advanced Crop Lab

2013

Flad's master plan, which delineated the next 20 years of campus development, placed the 207,000-square-foot Innovation Center on the advanced crop lab's northern elevation.

N
NORTH

PHASE TWO
RTP Innovation Center | 2016

Syngenta RTP Innovation Center

Unifying functions previously scattered across multiple buildings in Research Triangle Park, the Innovation Center features transparency, accessibility, and visibility, which together form the new template for agriscience, all in support of maximizing interaction and connection among the science teams, administrative groups, and visiting partners. Qualitatively, it's unlike any other ag biotech corporate environment.



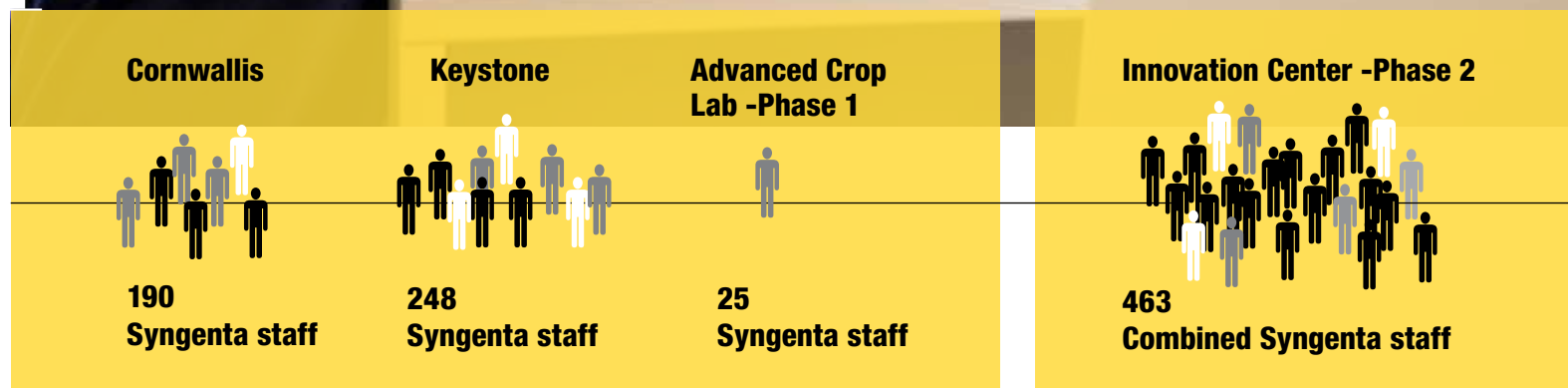


building community

“We have a whole different way of looking at things – it’s more open. Before, I hardly saw the people I work with, since we were isolated and walled off in different sections of the old building, and now I interact with more people I didn’t interact with previously, which is a good thing.”

Vance Kramer
Biologicals; Team Lead
Molecular Biology

Prior to
Innovation
Center



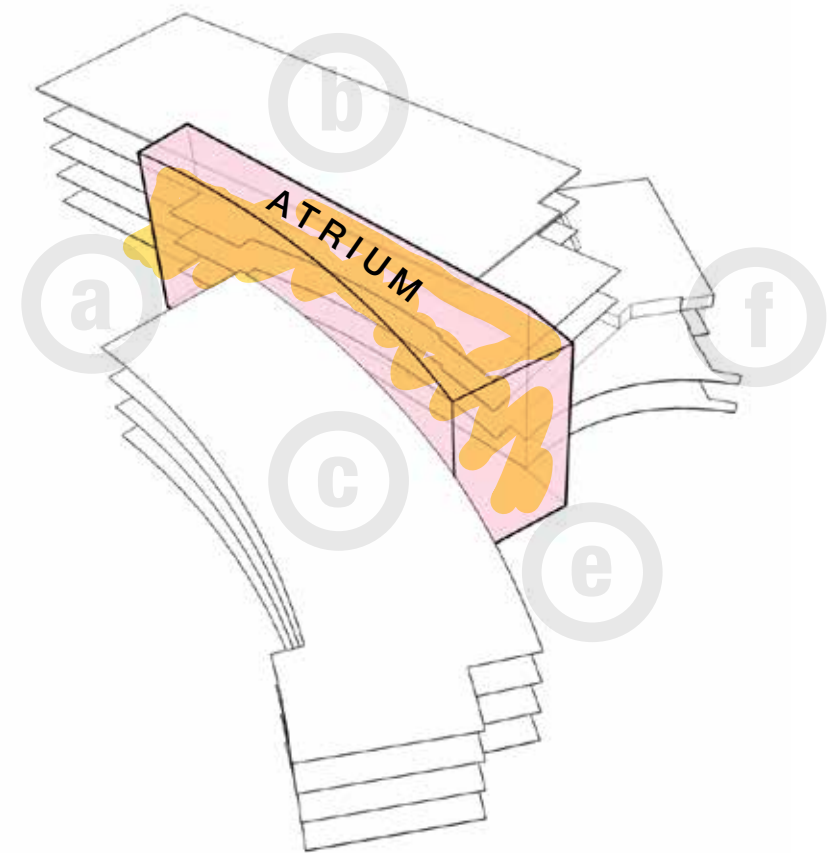
Completed Innovation Center

+50%

Collaboration interactions increased by more than 50% through daily travel paths throughout the complex.

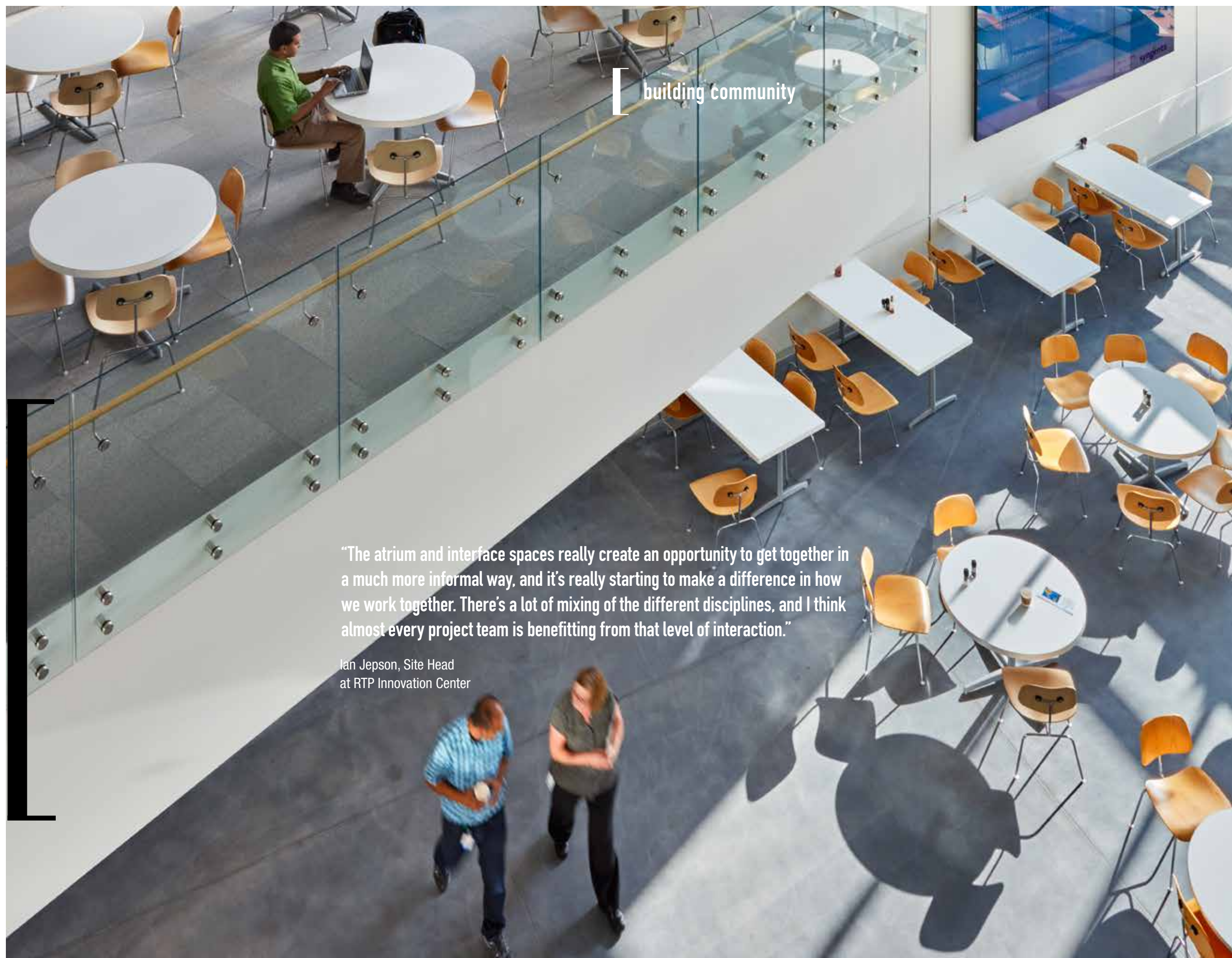
building community

- a** MAIN ENTRY
- b** LABORATORY WING
- c** ADMINISTRATIVE WING
- d** ATRIUM
- e** COURTYARD
- f** ADVANCED CROP LAB



A ribbon of community space runs through the center of the complex, providing a full range of amenities that support a four-story laboratory wing and a three-story administrative wing. The atrium is a magnet for activity, designed to maximize interaction. This four-story space flows through the Innovation Center from the main entry to the courtyard in the center of the campus, linking research and non-research people and program spaces. This public route continues through the cafeteria to connect with the Advanced Crop Lab, stitching the facilities together outside of the laboratory spaces.





building community

“The atrium and interface spaces really create an opportunity to get together in a much more informal way, and it’s really starting to make a difference in how we work together. There’s a lot of mixing of the different disciplines, and I think almost every project team is benefitting from that level of interaction.”

Ian Jepson, Site Head
at RTP Innovation Center



QUIET SPACES

The overall arrangement of the building is zoned to locate quiet spaces for concentration along the exterior perimeter away from the active, buzzy atrium space running down the building's center.



SMALL CONFERENCE

Groups of small enclosed huddle rooms line the sides of the atrium, creatively performing double duty as an acoustic buffer between spaces. With sound-dampening panels strategically located along the atrium walls, these rooms are sealed from outside noise yet maintain transparency across the floorplate into the atrium and offices.



DESTINATION POINTS

Frequently used amenities such as coffee kitchens with casual soft seating, small huddle rooms, and conference rooms are strategically located on balconies on both sides of the atrium to create destination points in the floor plate, maximizing interaction among colleagues.

These amenities are easily accessed from the atrium bridges, making them ideal meeting locations or providing a break from intense research activities. They are shared by the entire building community, designed to unite the world-class talent working in the facility.



building community

CONNECTIONS

The first floor of the Innovation Center balances diverse access requirements (of researchers and admin staff, external visitors, and partners) through careful spatial zoning of the floor plan. For example, the crop transformation suite, a secured research laboratory, runs parallel to the main entrance and atrium, but with highly controlled access points.

Similarly, the adjacent Advanced Crop Lab is connected to the Innovation Center through two access points between the facilities that establish separate paths for public and research traffic.

The public connection flows through the atrium and cafeteria, while the research connection occurs through a service corridor not accessible to the public, allowing these disparate functions to operate simultaneously.

One challenge that arises from such an open environment is the need to monitor and secure the building.

A dedicated suite for visitors at the entry provides comfortable conference and lounge amenities. Guests are welcomed here by Syngenta staff, registered with security personnel, and accompanied into the building.

Syngenta RTP Innovation Center

“I love it! The building is beautiful, and it’s nice to be able to find people who were five miles down the road before. It was an afternoon project almost. This is much nicer – and multiply that by however many people we have here who need to interact.”

Mary-Dell Chilton, Syngenta RTP Innovation Center

Mary-Dell Chilton, one of the founders of modern plant biotechnology, is a Syngenta researcher of such stature that she was honored by the firm with the 2002 creation of the Mary-Dell Chilton Center, an administrative and conference center at the Syngenta facility. Chilton is a laureate of the prestigious 2013 World Food Prize and a 2015 inductee in the National Inventors Hall of Fame.



modern science

ENABLING MODERN SCIENCE

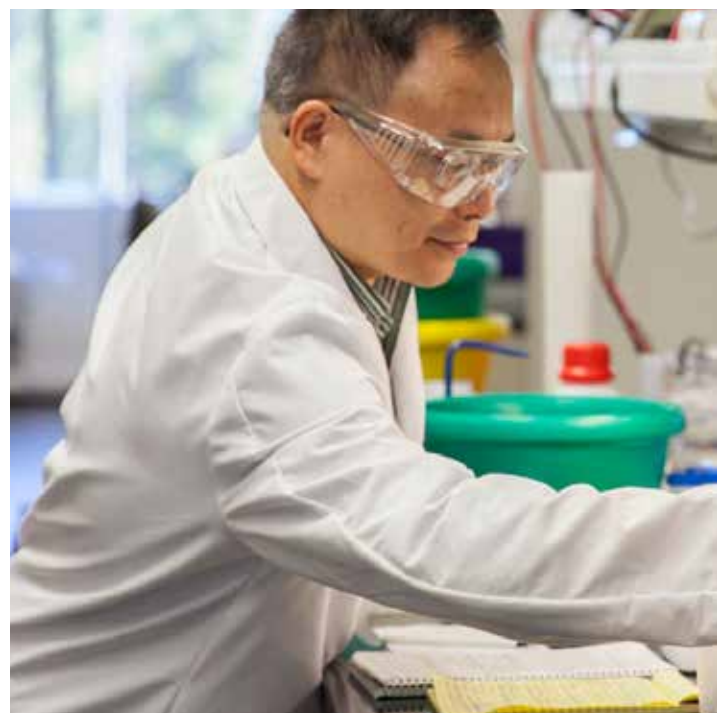
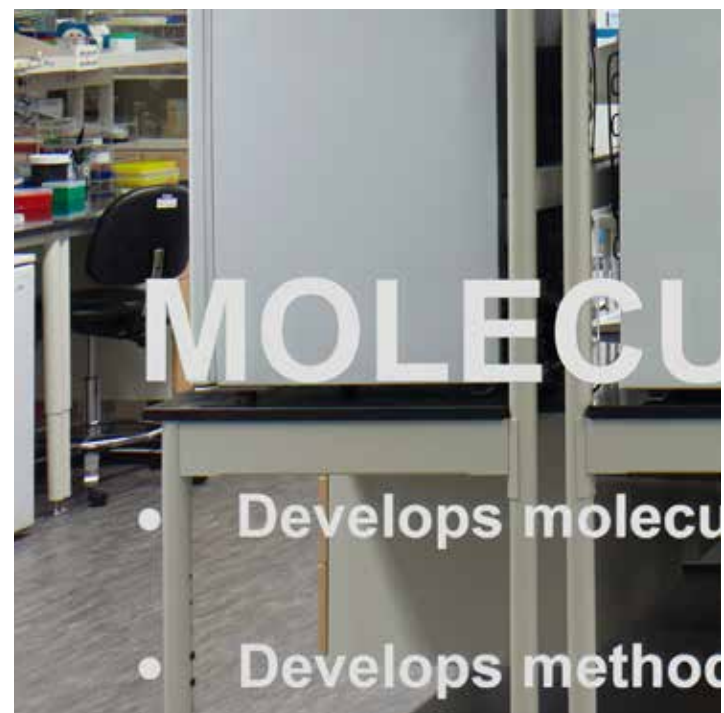
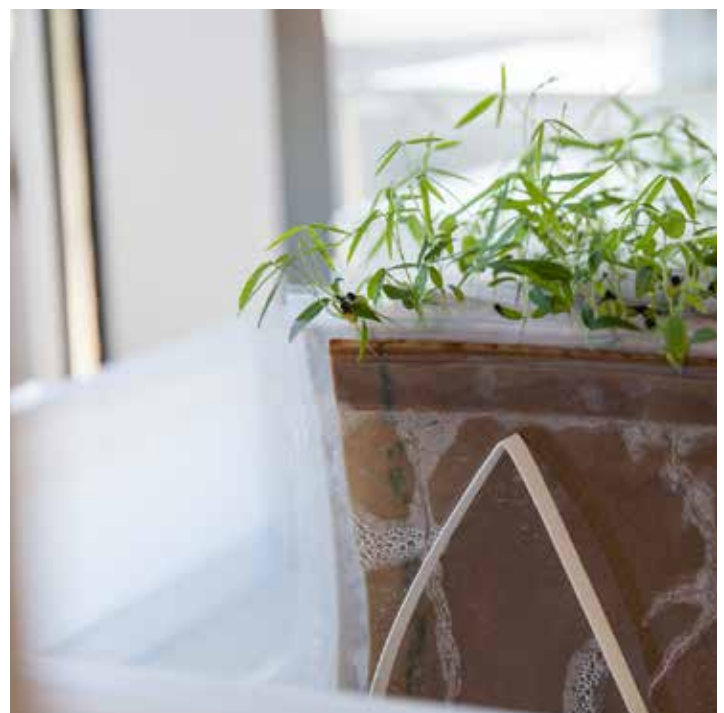
THE BUILDING'S RESEARCH FLOORS FEATURE EXPANSIVE, REASSIGNABLE SPACE SIMILAR TO THOSE NOW PREVALENT IN MANY BIOMEDICAL AND ACADEMIC LABS. THE OPEN LAB **ENCOURAGES INTERACTION** OF SCIENTISTS FROM DIFFERENT DISCIPLINES AND MAXIMIZES EFFICIENT WORKFLOW AND THE EXCHANGE OF IDEAS.

[modern science

"a perfect layout"

Our group interacts with the media lab, plant analysis, and Crop Lab on a daily basis. The media lab is right next door; plant analysis is just a floor above; the Crop Lab is on the same floor, just a wing away. It's a perfect layout for a lab."

Sivamani Elumalai, PhD, Senior Research Scientist



modern science

Designed in direct response to Syngenta's research mission, the facility is simple, lean, and highly adaptable. Scientists work in teams for finite periods of time, focusing on solving specific problems related to basic genomic research and new product development. Once project goals are achieved, the teams are reorganized into new teams to solve the next challenge. The architecture and infrastructure supporting them must be nimble and responsive to ensure teams have access to the right people, spaces, and technology in support of an evolving and ever-changing series of scientific capability demands.





RESEARCH WING

a

GLASS WALL

A full-height glass wall separates the lab suite from the adjacent open offices, creating transparency between work zones and allowing daylight to permeate the entire space.

modern science

The Innovation Center recognizes and anticipates changes in future research methodologies and pursuits. The new design removes obstructions and employs an open, large, and flexible laboratory floor plate that provides the flexibility required to accommodate research teams that vary in size and change, depending on research and product development goals.

The research wing is organized to encourage interaction and collaboration among the researchers. To achieve this, each floor consists of office space and a lab suite.

Each 200-foot-long by 64-foot-deep laboratory suite contains a combination of open lab and lab support. Spaces for major support functions flank the open lab at each end.

RESEARCH WING



OPEN LAB

A full-height glass wall separates the lab suite from the adjacent open offices, creating transparency between work zones and allowing daylight to permeate the entire space.

Each floor of the research wing treats the entire floor plate as the laboratory workplace. With the elimination of a central corridor and solid walls, the line between lab and office is transparent and reveals the work occurring inside and outside the lab. Unobstructed sightlines extend from the atrium balcony, through the office area, and across the entire lab floor to views of outside.

RESEARCH WING

d SUPPORT PODS

Shared support pods embedded within the laboratory provide convenient access to frequently needed equipment.

modern science

A new approach to incorporating lab support within an expansive floor plate enables researchers' daily activities and allows frequent reconfiguration of research teams.

c MAJOR SUPPORT

Major support functions are placed at the shoulders of the open floor plate while immediate needs at the bench are serviced by shared support pods.

e MOVABLE BENCHES

Movable benches and plug-and-play ceiling utilities equip the space to support reconfiguration as project focus shifts and equipment changes occur.



RESEARCH WING



g

CONFERENCE ROOMS

modern science

f

WORKSTATIONS

Research scientists and their teams have workstations immediately outside the lab suite with access to a variety of team rooms and conference spaces. This configuration supports a safe environment with sightlines into the lab and promotes interaction with workstations in close proximity to the bench.

A photograph of a scientist in a white lab coat and safety glasses, wearing blue gloves, working in a laboratory. The background is blurred, showing other people and lab equipment. The text 'SHARING THE SCIENCE STORY' is overlaid on the image.

SHARING THE SCIENCE STORY

THE INNOVATION CENTER IS DESIGNED TO SHOWCASE R&D INNOVATION, SUPPORT **FACILITY TOURS**, ENHANCE COLLABORATION, AND REINFORCE THE RELATIONSHIP BETWEEN LAB AND NON-LAB FUNCTIONS.

Sharing the science story

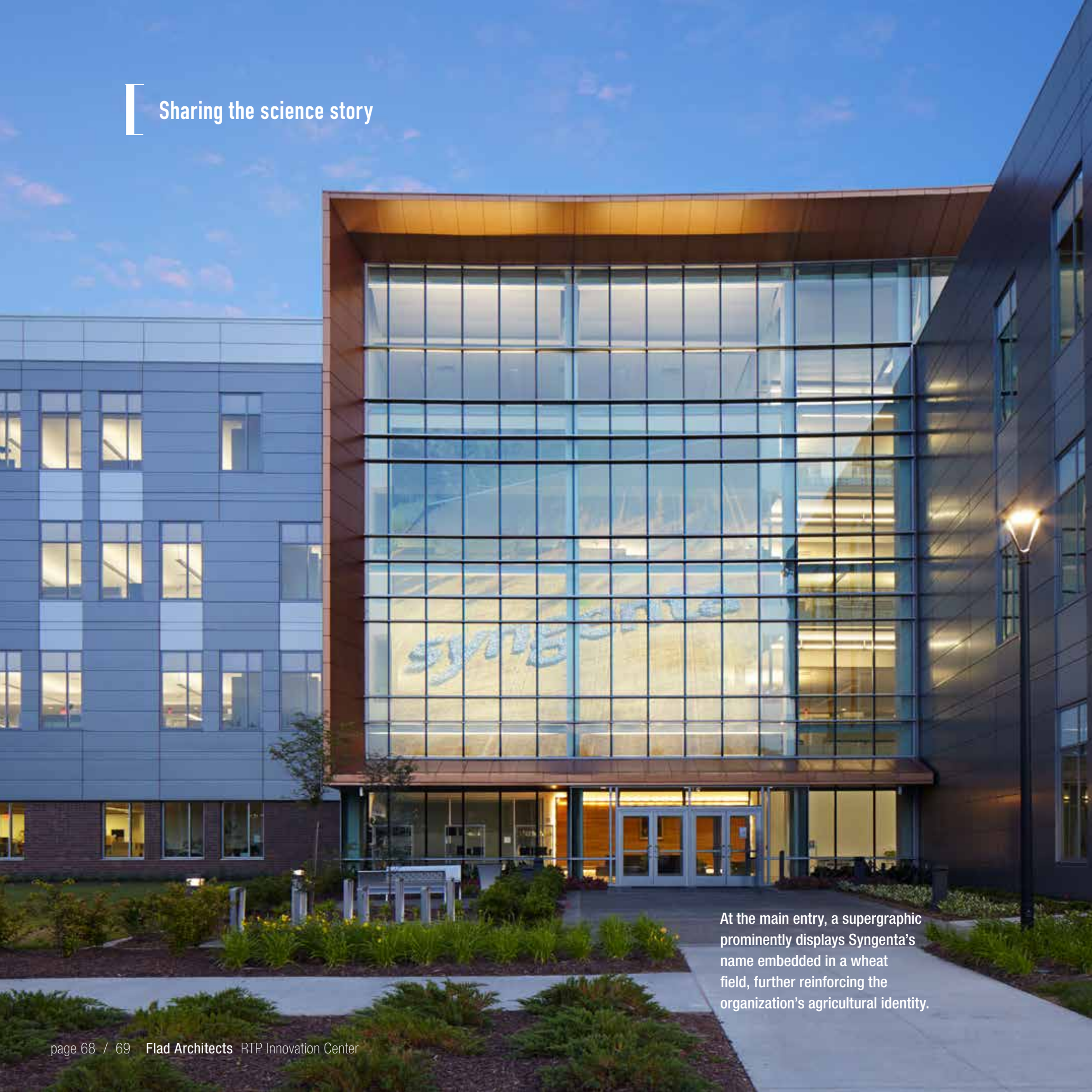
MOLECULAR ANALYTICS

- Develops molecular assays in support of marker-assisted breeding and quality control
- Develops methods and tools for high-throughput genotyping and analytical labs
- Evaluates technology and vendors for genotyping and omics

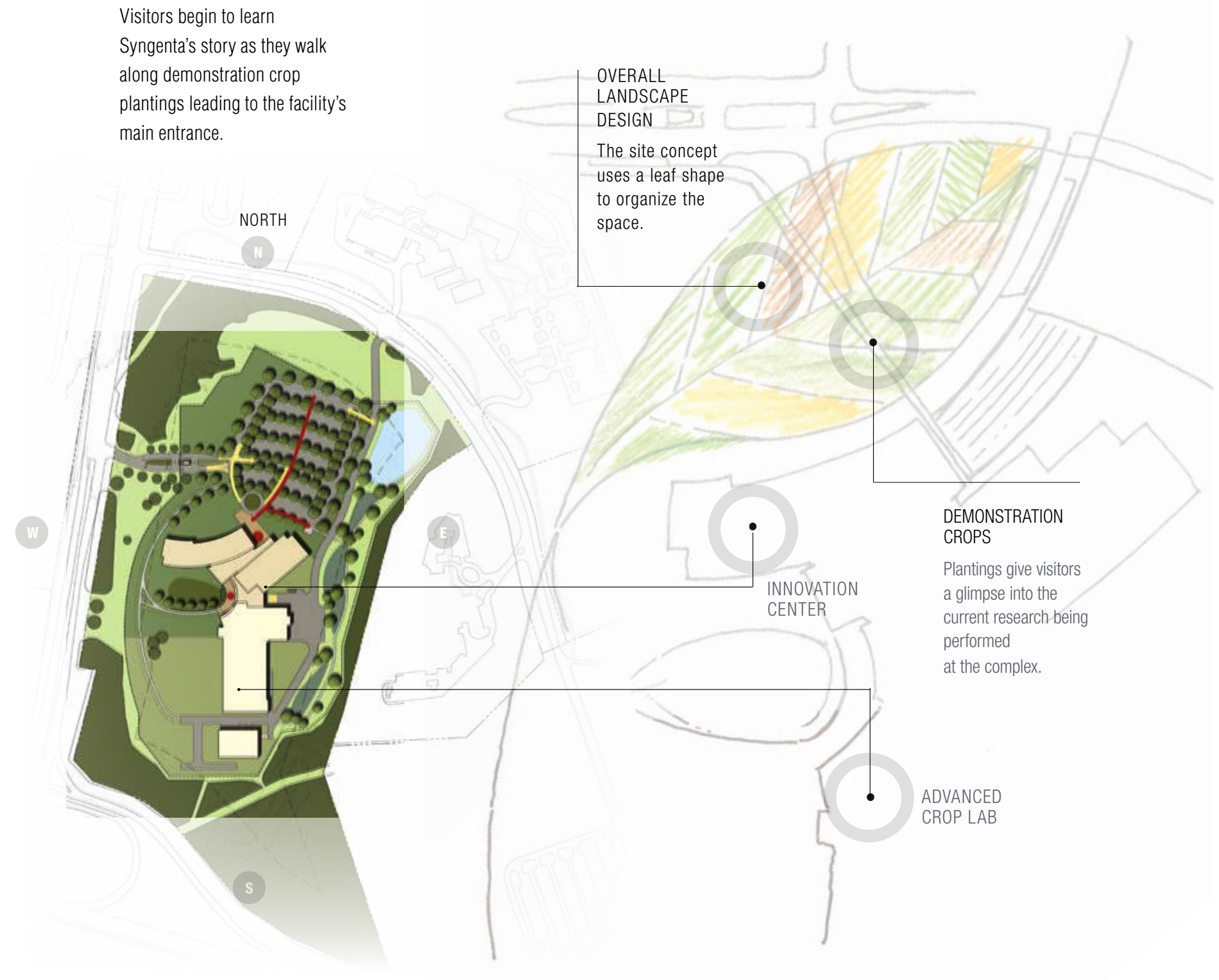
Incorporating a tour experience was a key goal of the project for Syngenta, and the building is designed to express the narrative of the ongoing research. In support of the collaboration and outreach activities that take place at the Innovation Center, a tour path through the facility celebrates scientific discovery and achievement.

Full-height glass walls separating office and lab zones along the tour route offer unobstructed views into the laboratories and provide a surface for displaying text and graphics that communicate the type of science happening inside each lab. Groups can observe research processes

without disturbing researchers or compromising their work, and movable lab benches closest to the glass wall can be configured into a tour stop, highlighting a new project or unique piece of equipment.



At the main entry, a supergraphic prominently displays Syngenta's name embedded in a wheat field, further reinforcing the organization's agricultural identity.





Sharing the science story



Once inside, tour leaders escort groups through any number of routes to customize the experience. Tours occur on a frequent basis and can be adapted to fit the interests of corporate and academic partners, the local community, or K-12 students.



“Flad Architects helped turn our vision, needs, and aspirations into reality. We at Syngenta now have a showcase in Research Triangle Park that demonstrates our commitment to innovation, the region and state of North Carolina, and the global agribusiness industry.”

Pablo Hernandez, Sr. R&D Capital Project Manager, Syngenta







ABOUT Flad Architects

Flad Architects specializes in the planning and design of innovative facilities for healthcare, higher education, and science and technology clients. Serving clients globally, Flad is a recognized leader in resolving complex needs of knowledge-based organizations.

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