



THE RESEARCH  
TRIANGLE PARK

Have you ever asked:

“What is the Research  
Triangle Park?”



# TREES?



# PhDs?

# TEES?



But...

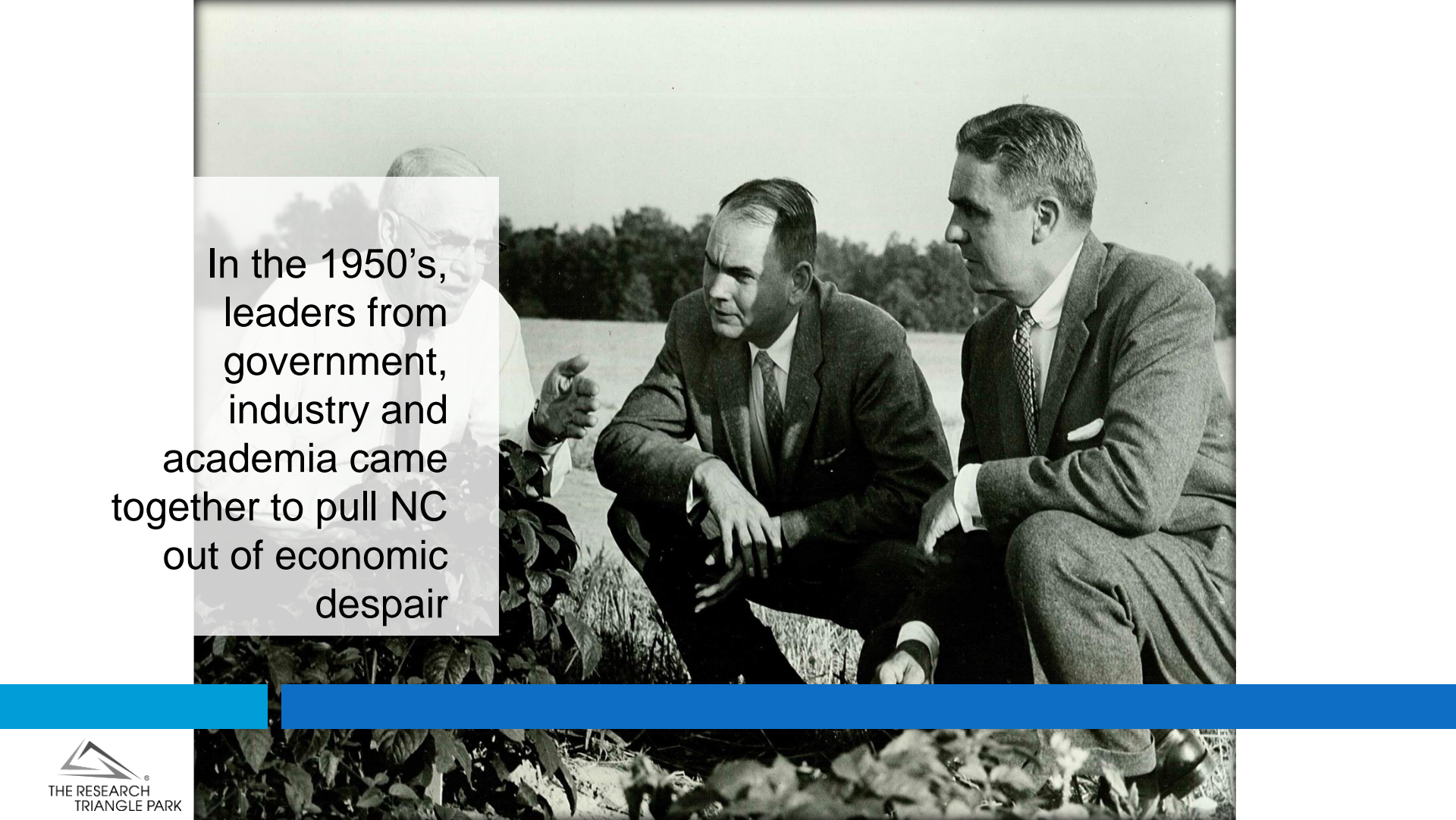
We're more than that.

A place, yes...

... but also an organization sworn to protect education, job creation and quality of life for all NC.

A story worth sharing...





In the 1950's,  
leaders from  
government,  
industry and  
academia came  
together to pull NC  
out of economic  
despair



Land was identified,  
money was raised, and  
plans for a large  
scientific research park  
were drawn up





The first companies  
were soon up and  
running after the Park's  
founding in 1959





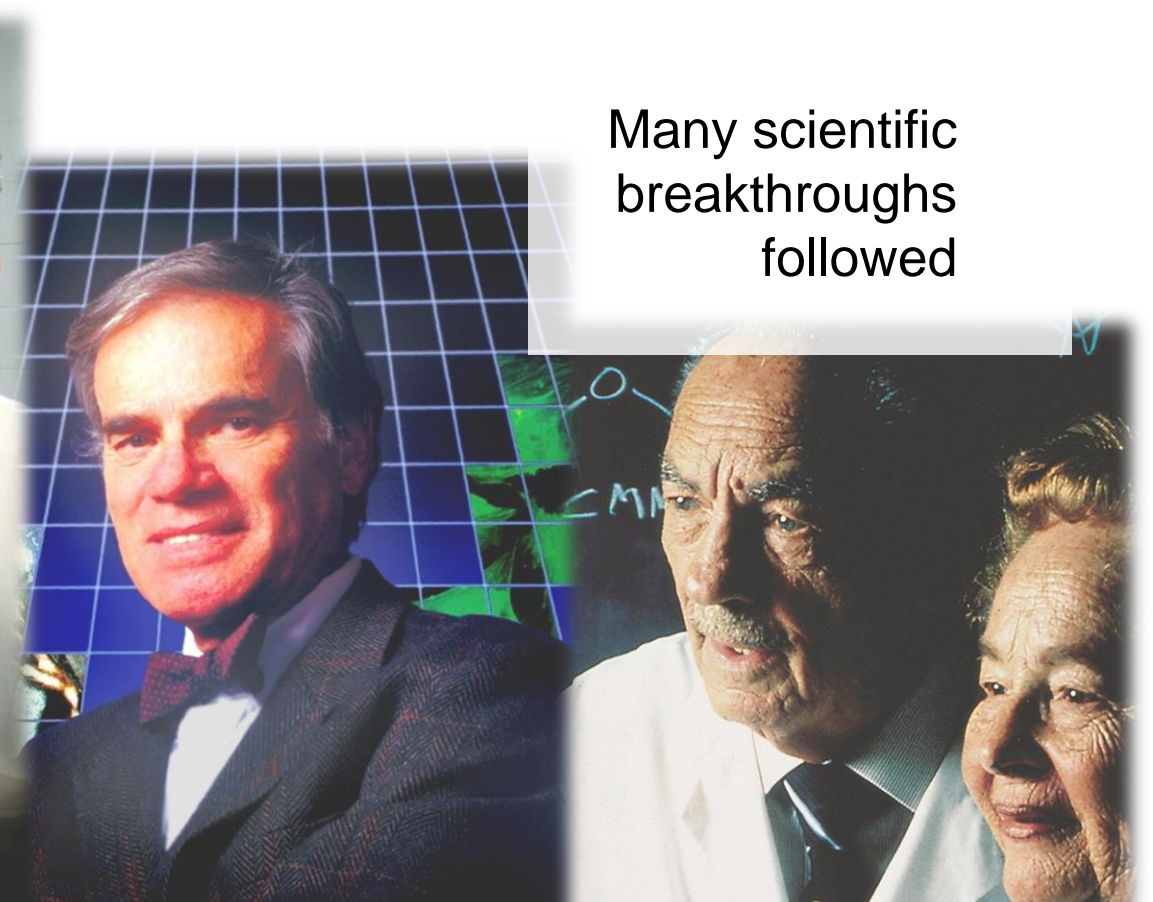
Through several major land sales in the 1960's, RTP paid off its mortgages and was soon a major economic engine



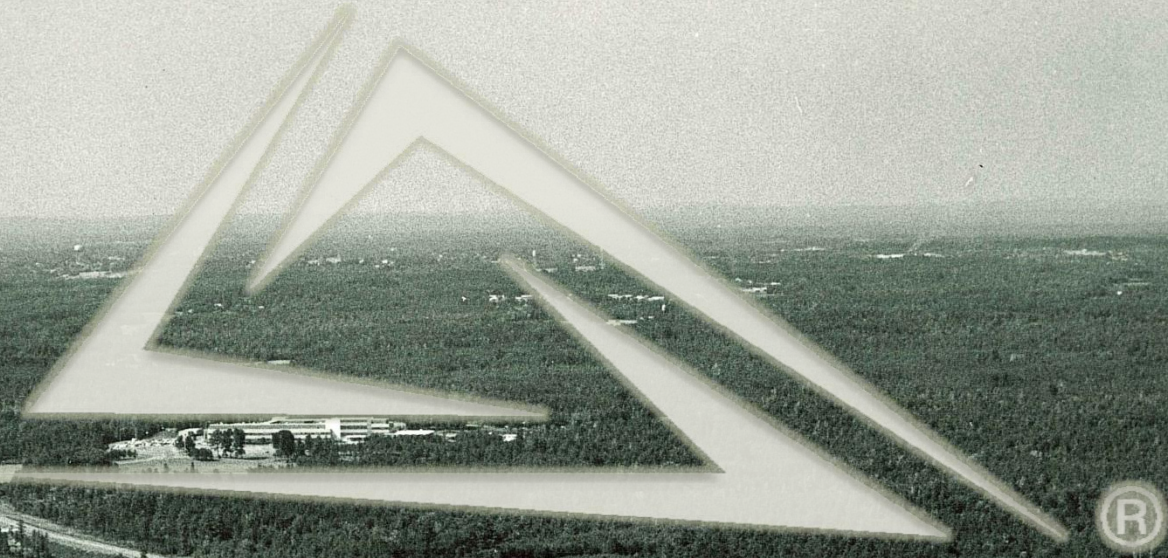


An economic  
legend was  
born

Many scientific  
breakthroughs  
followed







**RTP Today**

# RTP By The Numbers

7,000 acres

190+ companies

Life Science/IT/Tech/Cloud

22+ million sq ft

50,000+ employees

5 IT/Life Science Incubators w/  
50+ companies

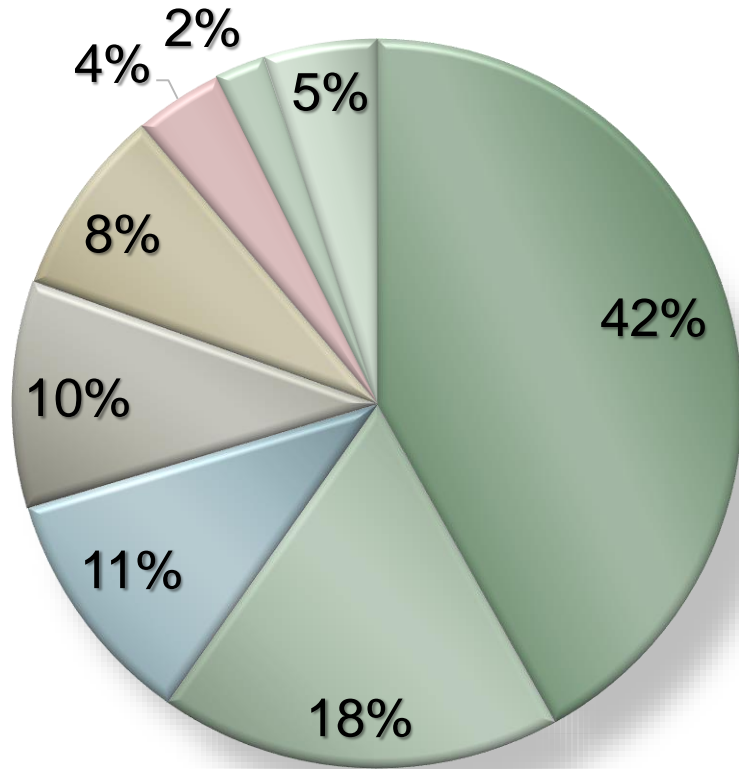




## New Companies, New Jobs, New Facilities

- Over \$1 Billion of capital investment in the past 5 years.
- Over 1 million sq ft of newly built space completed in that time, in addition to 367,000 sqft under construction or announced
- 2,200 new jobs announced since 2011
- On average, 20+ companies are founded in or move to RTP each year
- Expansions ongoing at NetApp, Syngenta, and Bayer CropScience





- Life Sciences
- Information Technology
- Professional and Management Consulting Services
- Foundations, Institutes and Scientific Associations
- Instruments and Advanced Materials
- Clean and Green Technologies
- Financial and Insurance Activities

...an array of R&D firms with strengths in pharmaceuticals, big data, crop science, cleantech, and more...



...one of **IBM's** largest sites in the world...

...the U.S. headquarters of **Lenovo**...







...**Cisco's**  
largest campus  
outside of its  
California  
headquarters...

...a 500-acre campus  
for federal  
government agencies  
(EPA & NIEHS)...





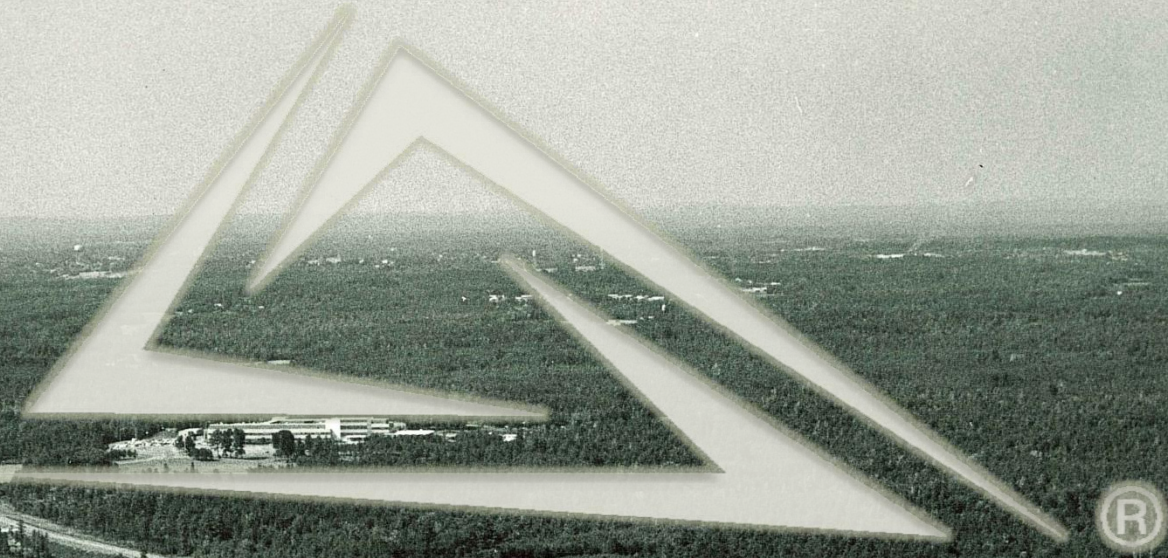
...Major operations  
for 4 of the world's  
top 6 agro-bio  
companies...

...RTI, the Park's first  
tenant and one of the  
world's leading  
research institutes...

...industry support  
organizations such as  
the **NC Biotechnology  
Center**...







**Brought to you by RTP**



Astroturf

(Chemstrand), 1965)



Taxol, one of the most widely prescribed anti-cancer medications in the world.

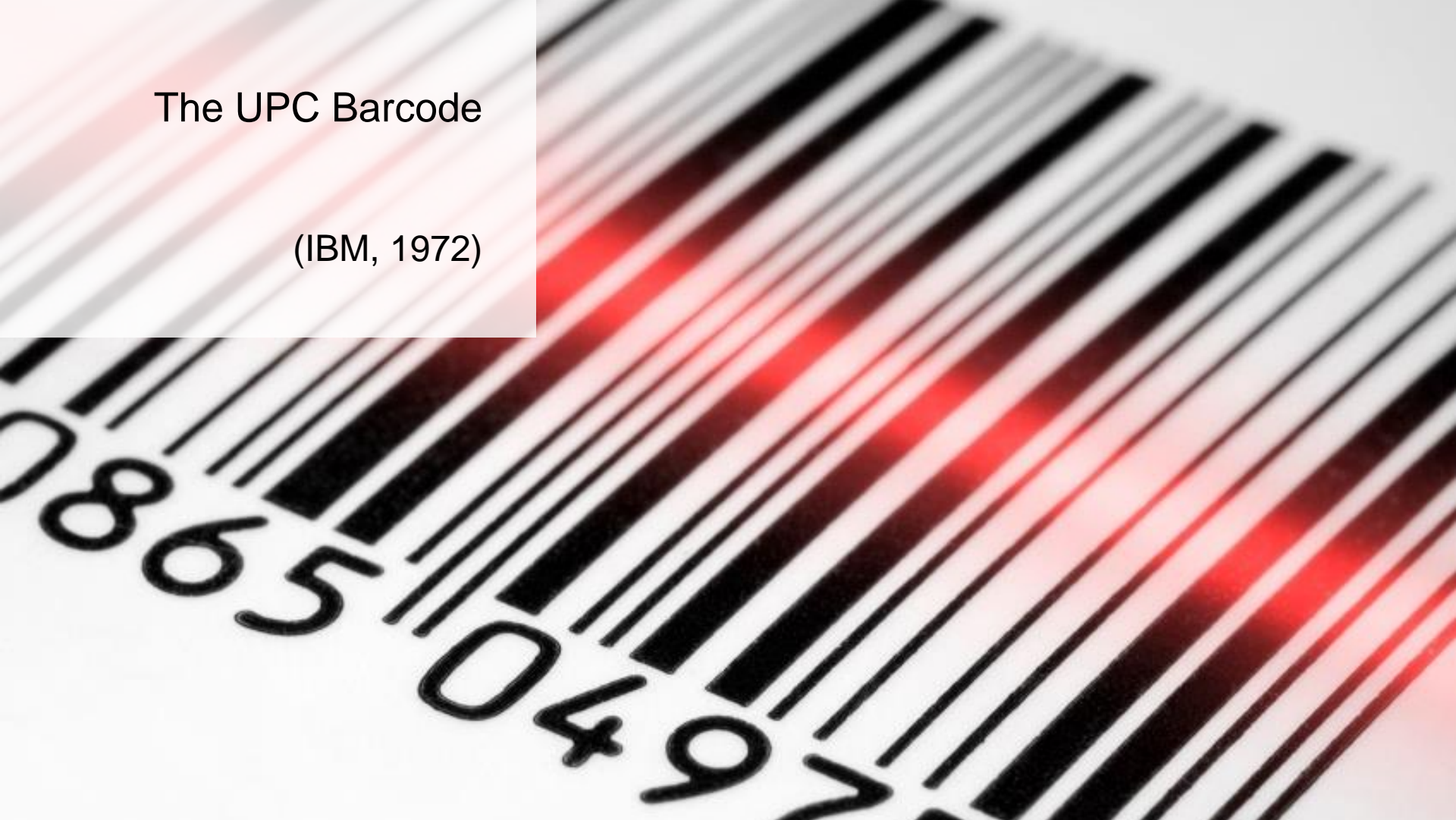
(GSK, 1967)





# The UPC Barcode

(IBM, 1972)





The Ctrl+Alt+Delete  
function

(IBM, 1980)



# Digital cellular technology

(Bell Labs, 1980)



# Periodic Table of the Elements

The official periodic table of elements

(IUPAC, housed in RTP since 1997)

1 1IA 11A <b>1</b> <b>H</b> Hydrogen 1.0079	2 IIA 2A <b>4</b> <b>Be</b> Beryllium 9.01218											13 IIIA 3A <b>5</b> <b>B</b> Boron 10.811	14 IVA 4A <b>6</b> <b>C</b> Carbon 12.011	15 VA 5A <b>7</b> <b>N</b> Nitrogen 14.00674	16 VIA 6A <b>8</b> <b>O</b> Oxygen 15.9994	17 VIIA 7A <b>9</b> <b>F</b> Fluorine 18.998403	18 VIIIA 8A <b>10</b> <b>Ne</b> Neon 20.1797				
<b>3</b> <b>Li</b> Lithium 6.941	<b>11</b> <b>Na</b> Sodium 22.989768	<b>12</b> <b>Mg</b> Magnesium 24.305	3 IIIB 3B <b>21</b> <b>Sc</b> Scandium 44.95591	4 IVB 4B <b>22</b> <b>Ti</b> Titanium 47.88	5 VB 5B <b>23</b> <b>V</b> Vanadium 50.9415	6 VIB 6B <b>24</b> <b>Cr</b> Chromium 51.9961	7 VIIB 7B <b>25</b> <b>Mn</b> Manganese 54.938	8 <b>26</b> <b>Fe</b> Iron 55.847	9 VIII 8 <b>27</b> <b>Co</b> Cobalt 58.9332	10 <b>28</b> <b>Ni</b> Nickel 58.6934	11 IB 1B <b>29</b> <b>Cu</b> Copper 63.546	12 IIB 2B <b>30</b> <b>Zn</b> Zinc 65.39	13 <b>31</b> <b>Al</b> Aluminum 26.981539	14 <b>32</b> <b>Si</b> Silicon 28.0855	15 <b>33</b> <b>P</b> Phosphorus 30.973762	16 <b>34</b> <b>S</b> Sulfur 32.06	17 <b>35</b> <b>Cl</b> Chlorine 35.4527	18 <b>36</b> <b>Ar</b> Argon 39.948			
<b>19</b> <b>K</b> Potassium 39.0983	<b>37</b> <b>Rb</b> Rubidium 85.4678	<b>20</b> <b>Ca</b> Calcium 40.078	<b>38</b> <b>Sr</b> Strontium 87.62	<b>39</b> <b>Y</b> Yttrium 88.90585	<b>40</b> <b>Zr</b> Zirconium 91.224	<b>41</b> <b>Nb</b> Niobium 92.90638	<b>42</b> <b>Mo</b> Molybdenum 95.94	<b>43</b> <b>Tc</b> Technetium 98.9072	<b>44</b> <b>Ru</b> Ruthenium 101.07	<b>45</b> <b>Rh</b> Rhodium 102.9055	<b>46</b> <b>Pd</b> Palladium 106.42	<b>47</b> <b>Ag</b> Silver 107.8682	<b>48</b> <b>Cd</b> Cadmium 112.411	<b>49</b> <b>In</b> Indium 114.819	<b>50</b> <b>Sn</b> Tin 118.71	<b>51</b> <b>Sb</b> Antimony 121.760	<b>52</b> <b>Te</b> Tellurium 127.6	<b>53</b> <b>Bi</b> Bismuth 208.9804	<b>54</b> <b>Po</b> Polonium [209]	<b>55</b> <b>At</b> Astatine [209]	<b>56</b> <b>Rn</b> Radon [222]
<b>55</b> <b>Cs</b> Cesium 132.90543	<b>87</b> <b>Fr</b> Francium 223.0197	<b>56</b> <b>Ba</b> Barium 137.327	<b>88</b> <b>Ra</b> Radium 226.0254	57-71 <b>Lanthanide Series</b>	<b>72</b> <b>Hf</b> Hafnium 178.49	<b>73</b> <b>Ta</b> Tantalum 180.9479	<b>74</b> <b>W</b> Tungsten 183.85	<b>75</b> <b>Re</b> Rhenium 186.207	<b>76</b> <b>Os</b> Osmium 190.23	<b>77</b> <b>Ir</b> Iridium 192.22	<b>78</b> <b>Pt</b> Platinum 195.08	<b>79</b> <b>Au</b> Gold 196.9665	<b>80</b> <b>Hg</b> Mercury 200.59	<b>81</b> <b>Tl</b> Thallium 204.3833	<b>82</b> <b>Pb</b> Lead 207.2	<b>83</b> <b>Bi</b> Bismuth 208.9804	<b>84</b> <b>Po</b> Polonium [209]	<b>85</b> <b>At</b> Astatine [209]	<b>86</b> <b>Rn</b> Radon [222]		
					<b>104</b> <b>Rf</b> Rutherfordium [261]	<b>105</b> <b>Db</b> Dubnium [262]	<b>106</b> <b>Sg</b> Seaborgium [266]	<b>107</b> <b>Bh</b> Bohrium [264]	<b>108</b> <b>Hs</b> Hassium [269]	<b>109</b> <b>Mt</b> Meitnerium [268]	<b>110</b> <b>Ds</b> Darmstadtium [289]	<b>111</b> <b>Rg</b> Roentgenium [272]	<b>112</b> <b>Cn</b> Copernicium [285]	<b>113</b> <b>Uut</b> Ununtrium unknown	<b>114</b> <b>Uuq</b> Ununquadium [289]	<b>115</b> <b>Uup</b> Ununpentium unknown	<b>116</b> <b>Uuh</b> Ununhexium [288]	<b>117</b> <b>Uus</b> Ununseptium unknown	<b>118</b> <b>Uuo</b> Ununoctium unknown		

Lanthanide Series

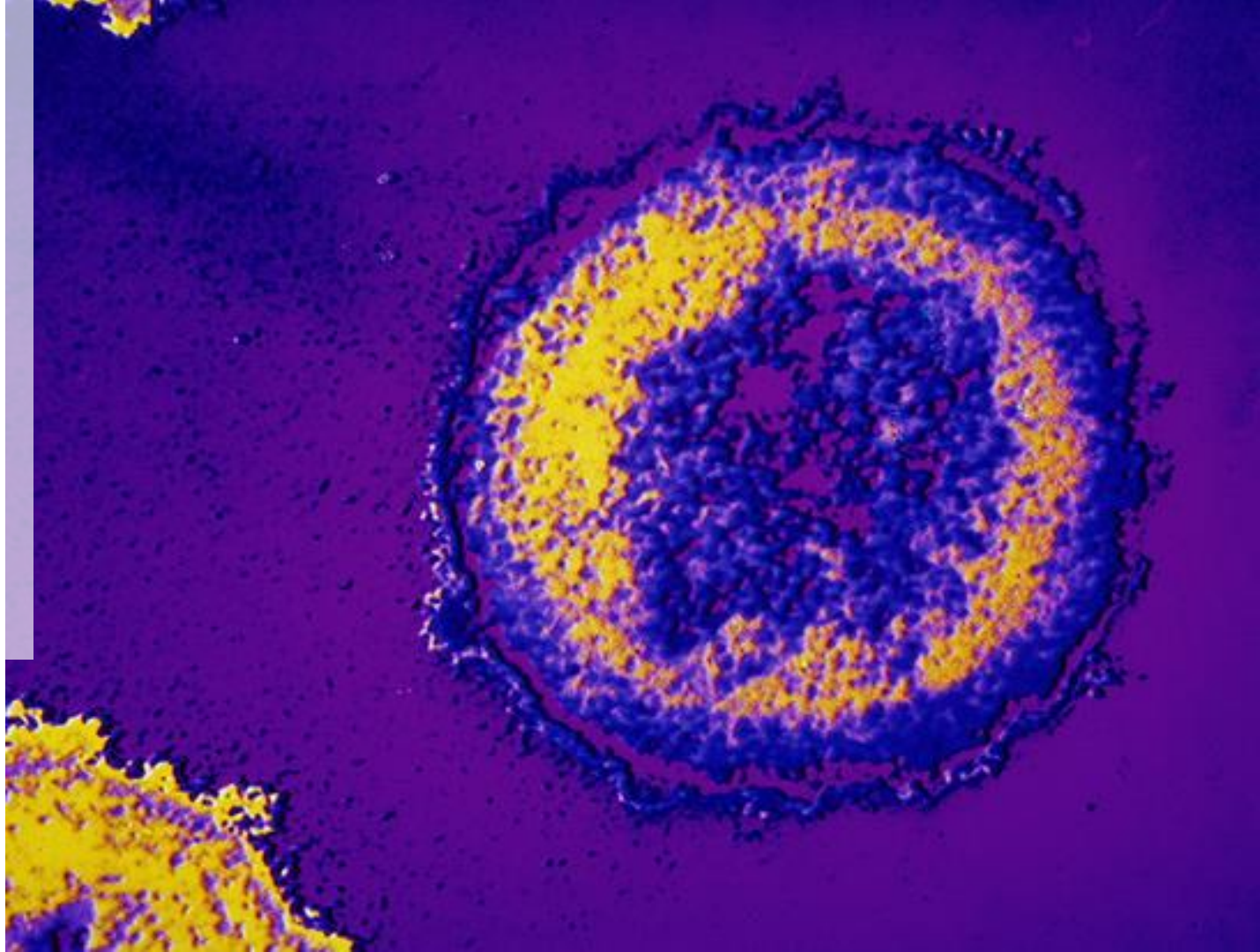
Actinide Series

57 <b>La</b> Lanthanum 138.9055	58 <b>Ce</b> Cerium 140.115	59 <b>Pr</b> Praseodymium 140.90765	60 <b>Nd</b> Neodymium 144.24	61 <b>Pm</b> Promethium 144.9127	62 <b>Sm</b> Samarium 150.36	63 <b>Eu</b> Europium 151.9655	64 <b>Gd</b> Gadolinium 157.25	65 <b>Tb</b> Terbium 158.92534	66 <b>Dy</b> Dysprosium 162.50	67 <b>Ho</b> Holmium 164.93032	68 <b>Er</b> Erbium 167.26	69 <b>Tm</b> Thulium 168.93421	70 <b>Yb</b> Ytterbium 173.04	71 <b>Lu</b> Lutetium 174.967
89 <b>Ac</b> Actinium 227.0278	90 <b>Th</b> Thorium 232.0381	91 <b>Pa</b> Protactinium 231.03688	92 <b>U</b> Uranium 238.0289	93 <b>Np</b> Neptunium 237.0482	94 <b>Pu</b> Plutonium 244.0642	95 <b>Am</b> Americium 243.0614	96 <b>Cm</b> Curium 247.0703	97 <b>Bk</b> Berkelium 247.0703	98 <b>Cf</b> Californium 251.0796	99 <b>Es</b> Einsteinium [254]	100 <b>Fm</b> Fermium 257.0951	101 <b>Md</b> Mendelevium 258.1	102 <b>No</b> Nobelium 259.1009	103 <b>Lr</b> Lawrencium [262]

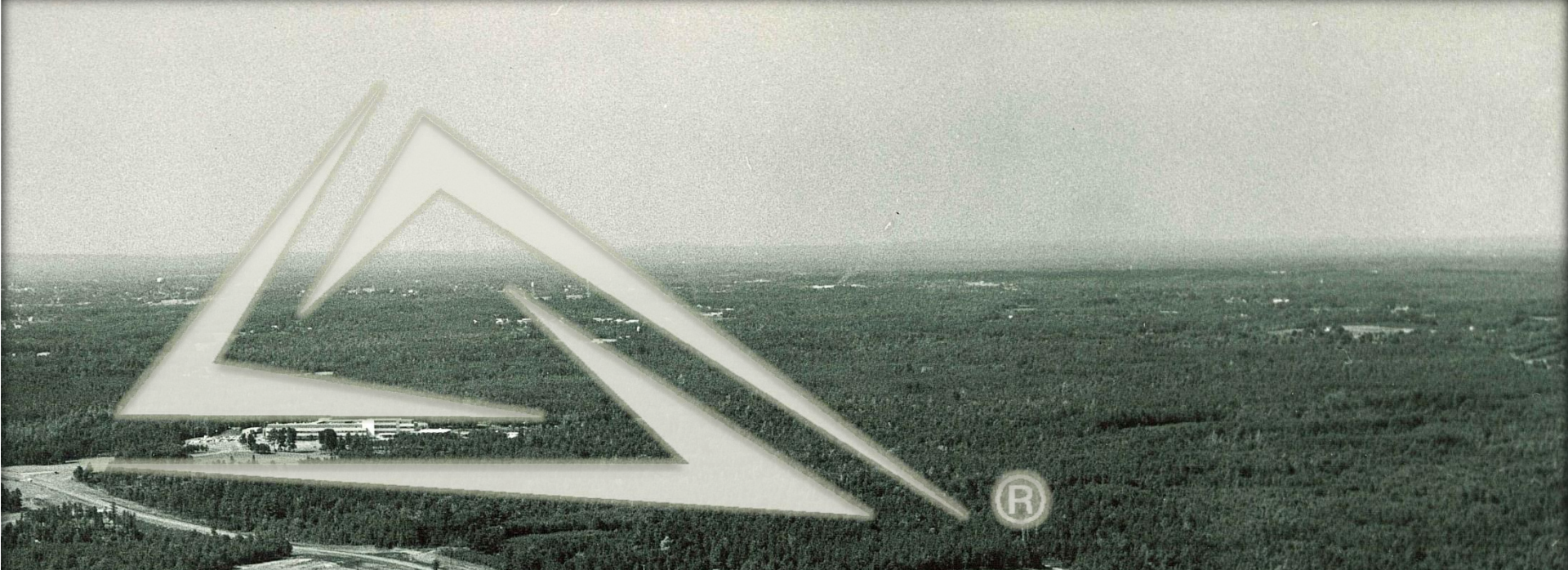
- Alkali Metal
- Alkaline Earth
- Transition Metal
- Basic Metal
- Semimetals
- Nonmetals
- Halogens
- Noble Gas
- Lanthanides
- Actinides

The second  
patient in the  
world ever  
functionally  
cured of HIV

(Viiv Healthcare, a  
GSK venture,  
2013)







**Discovery Culture  
Continues...**



Duke engineers are developing "metamaterials" to focus and redirect electromagnetic waves, forming an "invisibility cloak" around solid objects







UNC-Chapel Hill researchers are using a 120-foot wave tank to study marine sciences and mathematical models of fluid dynamics



NC State researchers developed a new method for forecasting seasonal hurricane activity that is 15% more accurate than previous techniques







Working in partnership  
with NASA, RTI  
engineers helped  
develop the wind shear  
avoidance and  
detection systems used  
in modern aircraft

EPA scientists are using a state-of-the-art wind tunnel to simulate how air pollution is dispersed in a city







Cree is a market-leading innovator of lighting products, LED components and semiconductor products for power and radio-frequency (RF) applications

Voluson Ailstock, Holly 09/26/1980 RAB4-8-D/OB MI 1.2 Greenville Memorial Hospital

GE E8 248472873 GA=35w1d 9.4cm / 1.0 / 2.0Hz TIs 0.1 AM 05/20/2009 03:39:46 PM

Surface  
Th30/Qual high2  
B58°/V65°  
Mix40/60  
SRI II 9  
4D Real Time



In 1987, the Center for Emerging Cardiovascular Technologies at Duke University developed 3-D ultrasound technology



NC State is the only  
university in the  
nation leading two  
National Science  
Foundation  
Engineering  
Research Centers

One of them is  
creating self-powered  
devices to help  
people monitor their  
own health





NC State's College of Textiles created PyroMan, a life-size model that helps textile engineers determine which materials best protect firefighters, industrial workers and soldiers from intense heat and flames

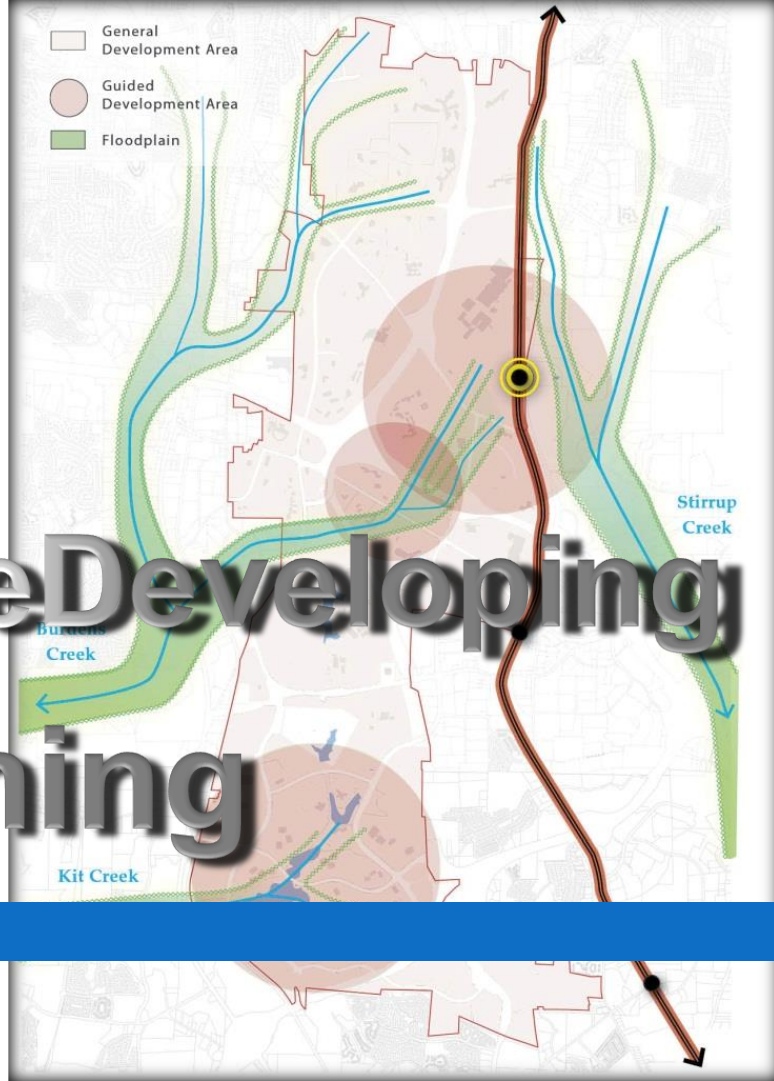






Grayson Clamp, through a research trial at UNC Hospitals, became the first child in the U.S. to receive an auditory brain stem implant, allowing him to hear for the first time

# ReConnecting ReDeveloping ReImagining





A new Master Plan  
for the Research  
Triangle Park was  
completed in 2012

The key principles of  
the Plan will allow  
RTP to remain a  
world-class location  
to conduct research

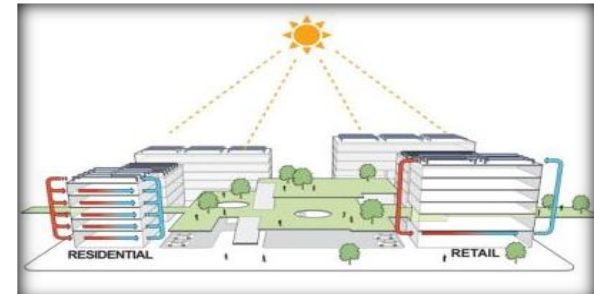
More Density  
More Nature



Sustainability



21st Century  
Amenities





RTP has gathered public input on the Master Plan through its official launch, the Pathways to Opportunity Bus Tour across NC, and the RTP Town Hall for Park employees

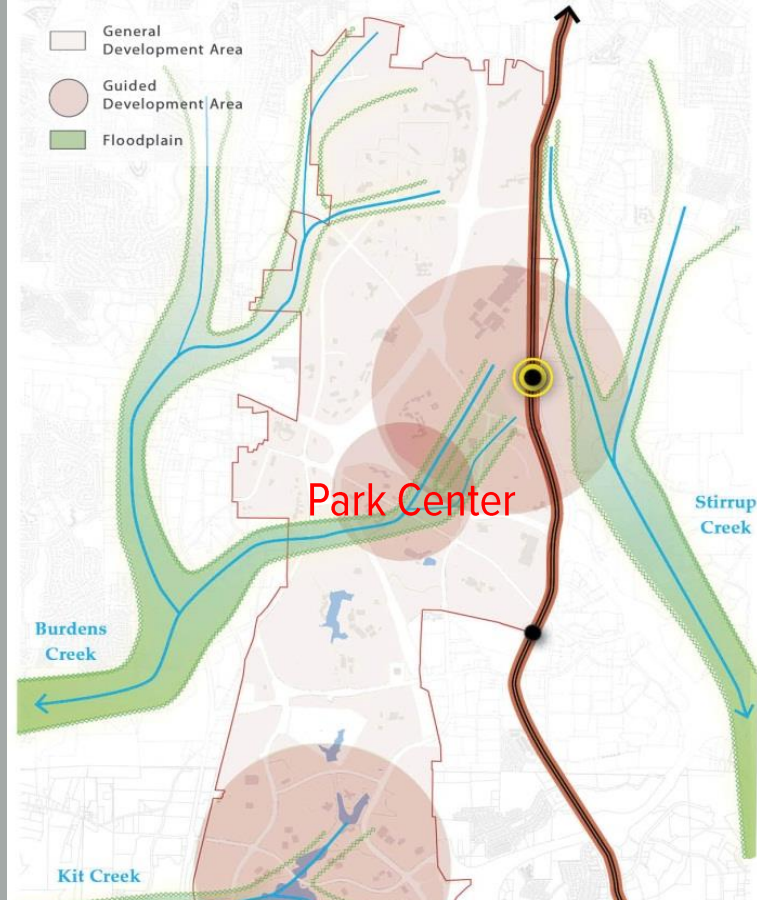


# Master Plan Process

3 Locations for Mixed-Use Development Identified

Park Center is the ideal location to begin.

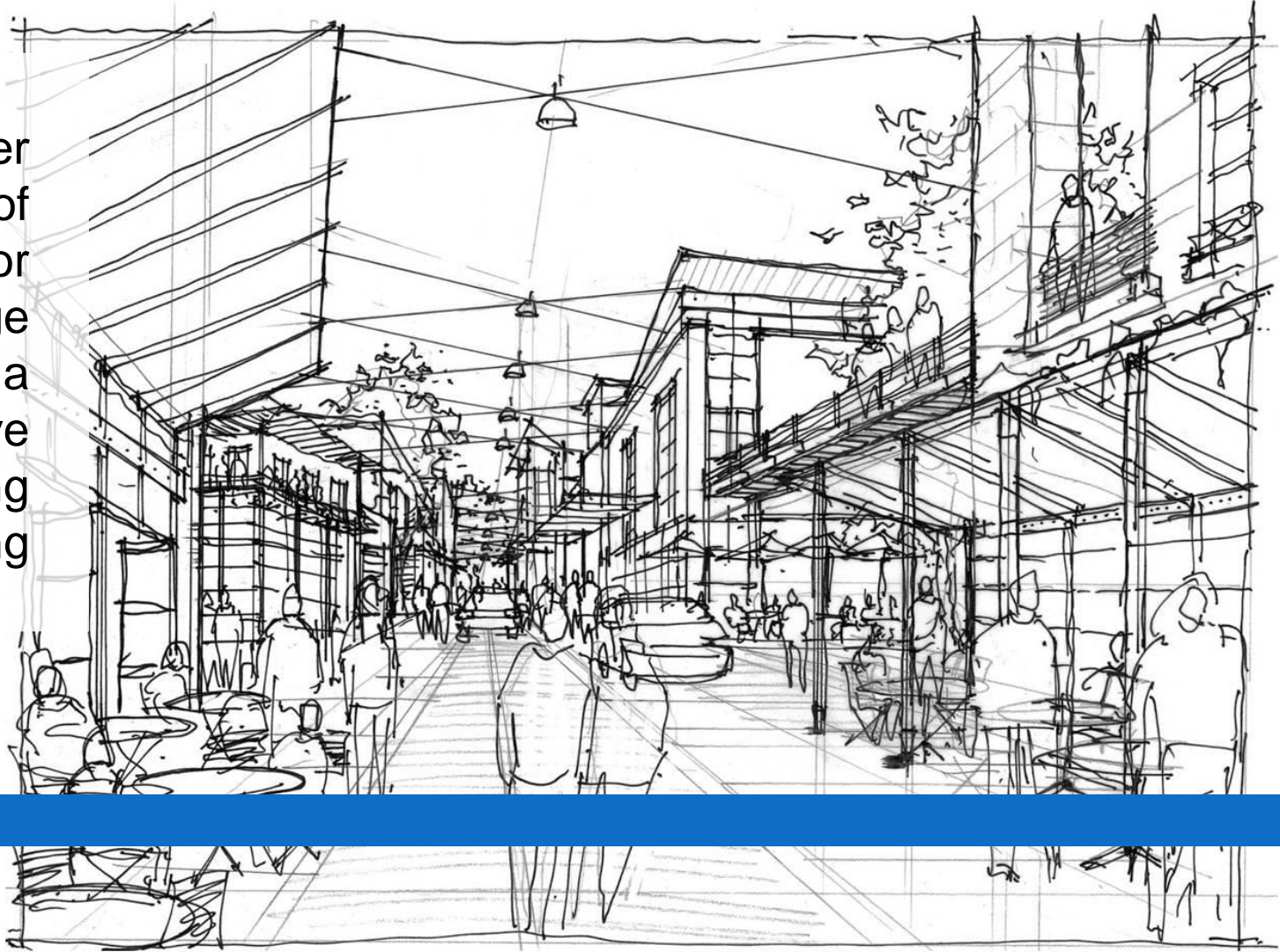
RTF purchased the Park Center property in January 2014.



The Plan envisions  
a mixed-use village  
in the heart of  
RTP...



...which will offer  
a new type of  
environment for  
cutting-edge  
research in a  
vibrant, creative  
and engaging  
setting



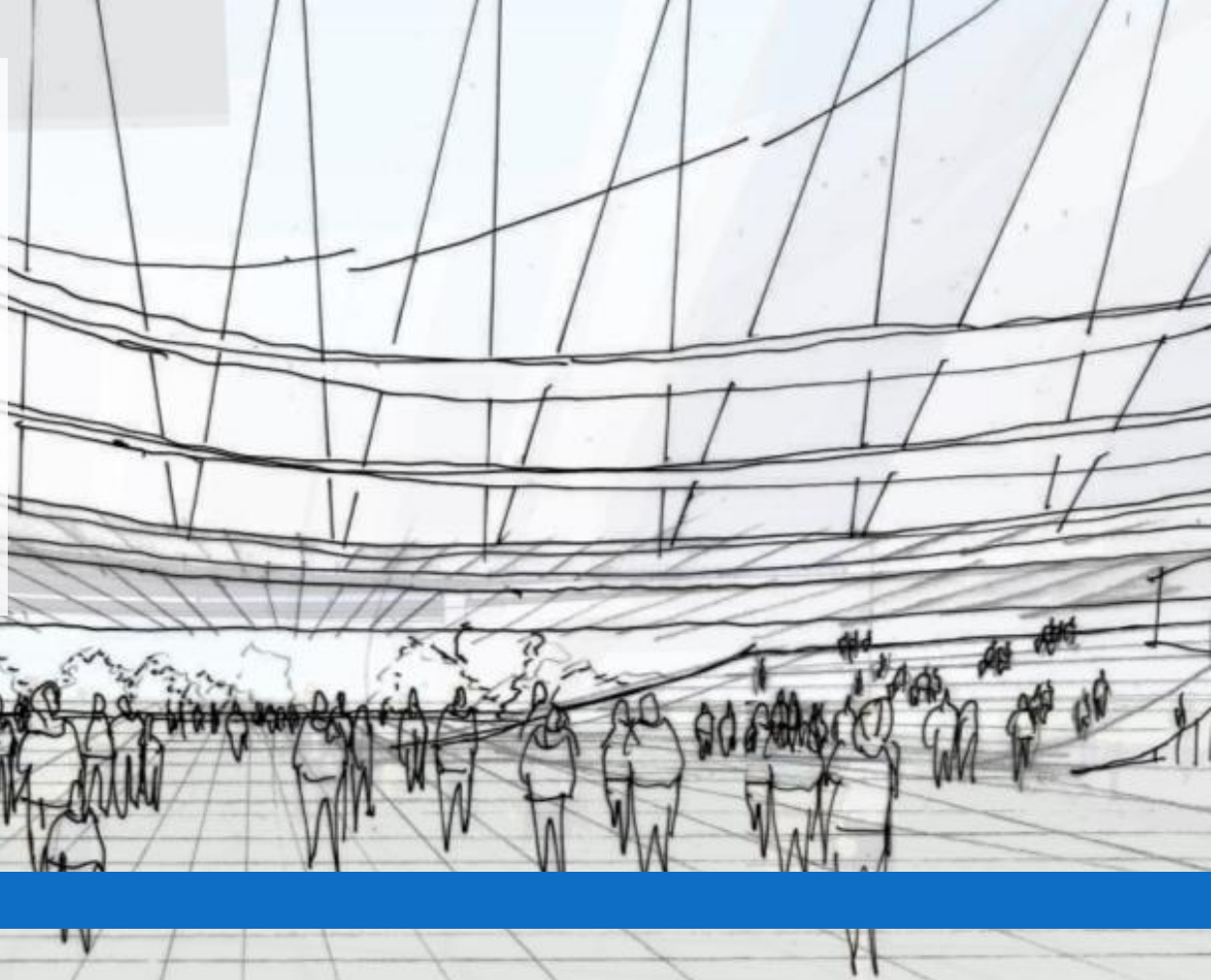


Park Center will feature many types of public gathering spaces in a compact, walkable area... as well as retail, residential and office...





...anchored by an  
iconic facility that will  
serve as a magnet  
for our founding  
universities,  
innovators and  
entrepreneurs.



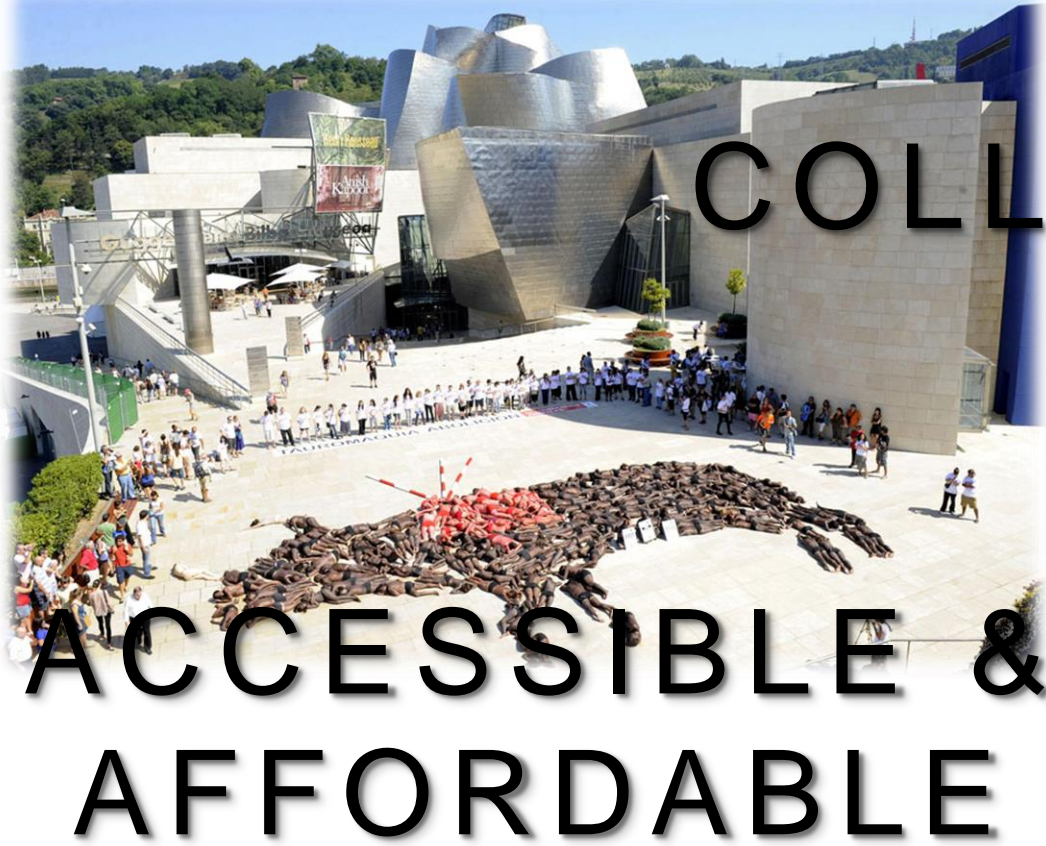
# INSPIRING

Reimagining RTP  
requires a  
development that  
will be...

# AUTHENTIC



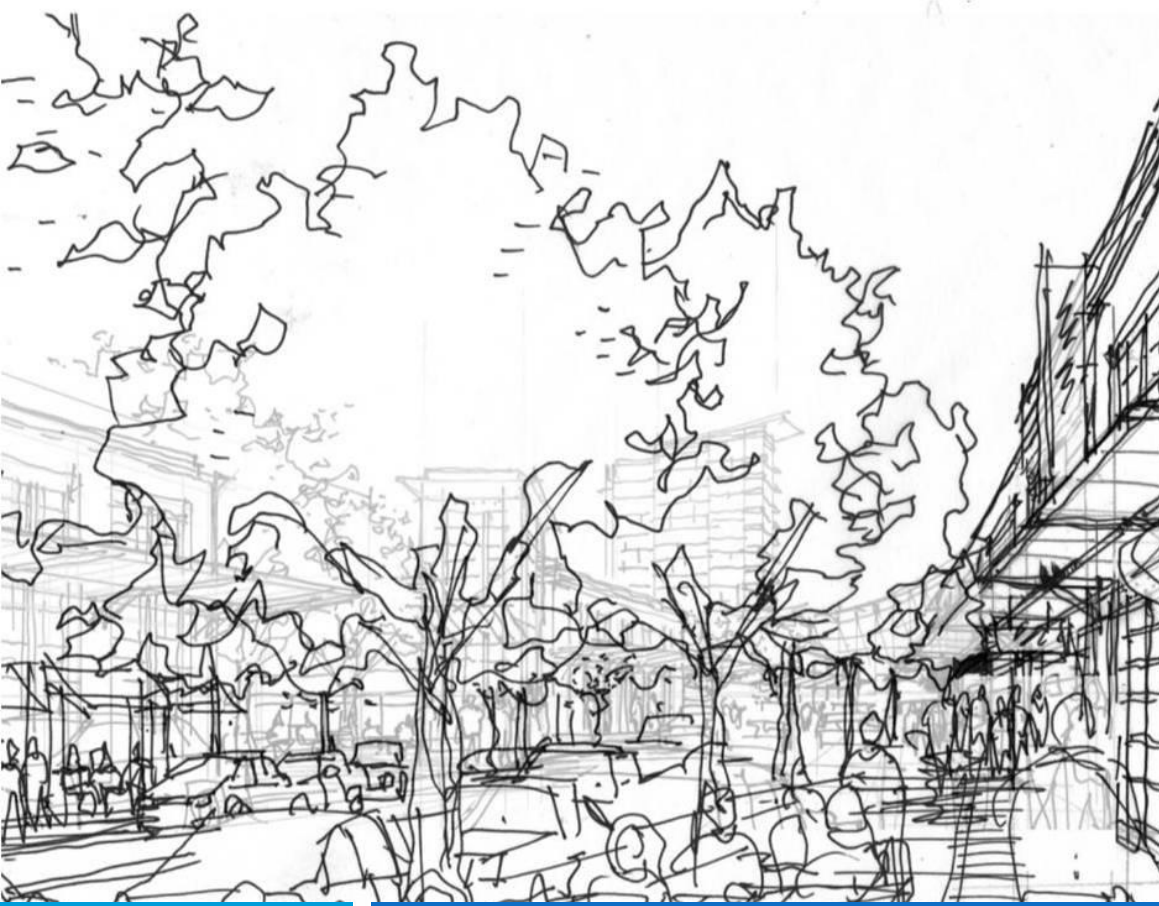




**COLLABORATIVE**

**ACCESSIBLE &  
AFFORDABLE**





This is the time,  
the place, for  
big ideas





# RTP Park Center



# Park Center Master Plan Design Team

- Development partnership with Hines
- Team of national designers and local consultants
- Unveiled detailed development plans in September 2014
- First phase construction over the next 3-5 years

Hines

Gensler



dudapainearchitects

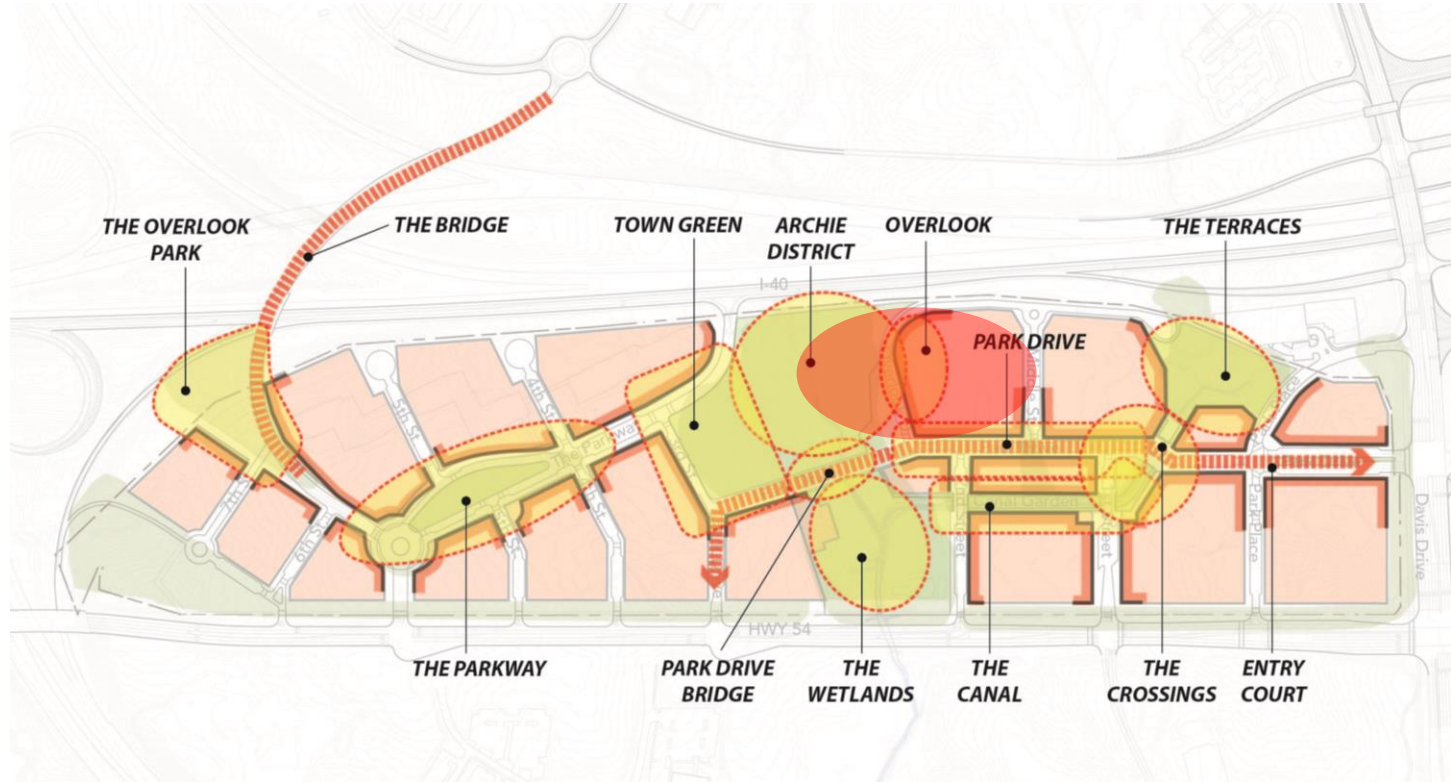




# Park Center Master Plan



# Places | People | Programs





# Places | People | Programs



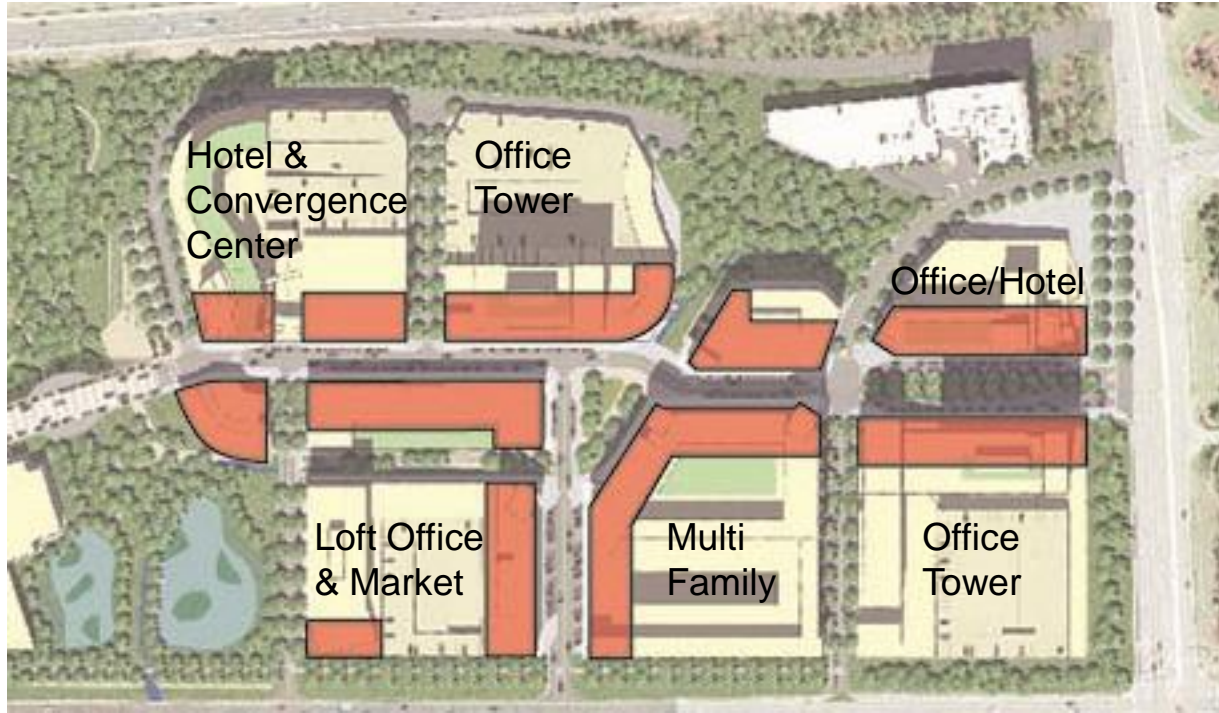
# Initial Development Program

- Retail: 250,000 sqft
  - Sufficient to create a critical mass
  - Focus on dining and entertainment
- Hotel: at least one full-service with
  - Shared conference facilities
- Residential: 300 units to start with
  - over 1,000 units at buildout
  - Apartments and other multifamily
- Office/Research: 750,000 sq ft
  - A range of product types





# Places | People | Programs



# Through The Trees





# The Crossroads



# The View from Above





# But what does this mean for me?



# Q: What do you feel in dollars/cents new projects coming to the Triangle might be and a timeframe?

A: Over the next 3-5 years, at the Park Center project alone, we anticipate there will be approximately:

\$15-20 million in site work and road construction

\$175-225 million in mid-rise commercial office buildings

\$20-25 million in institutional uses

\$50-65 million in retail shops and restaurants

\$70-75 million in wood frame apartment buildings

And, \$45-75 million in limited and full service hotel offerings

That's a total of \$375-485 million of construction dollars that will be spent in the 1st phase of Park Center alone.



Q: Is there anything contractors need to prepare for to be able to bid upcoming work (LEED requirements, BIM technology... ext)?

A:

- Exceeding current environmental sustainability and energy efficiency standards will be required.
- BIM technology and other means of technology-assisted modeling or planning will be utilized by our contractor partners and service providers.
- We are designing for a high-performance user and, accordingly, our buildings will need to be high-performance buildings.
- RTP has a strong desire to use local talent and to make our project easily accessible to minority and disadvantaged businesses.
- As far as what can you do as a AGC member? If you are aware of new technologies that we should consider, then please bring them to our attention. We want to hear from you!

# Additional Questions...?



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[@TheRTP](#) [www.RTP.org](http://www.RTP.org)