



Doug Dugard

Regional Facility Director

Smith & Nephew

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Sustainability Report

We have published our 2018 Sustainability Report



Life Unlimited

We have published our 2018 Sustainability Report

Putting people first

People come first at Smith & Nephew, whether it's our own employees, our partners, or the healthcare professionals whom we support to improve the lives of their patients.

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Delivering products with a reduced footprint

We have focused on improving our internal environmental footprint for a number of years, improving our performance in the areas of waste, water and emissions.

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Sustainability Report 2018

Life Unlimited

We have published our 2018 Sustainability Report. Read and download it in full.

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Annual Report 2018

We have published our Annual Report 2018. Read and download it in full.

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Energy Savings Projects

Doug Dugard
October 2019

Who We Are



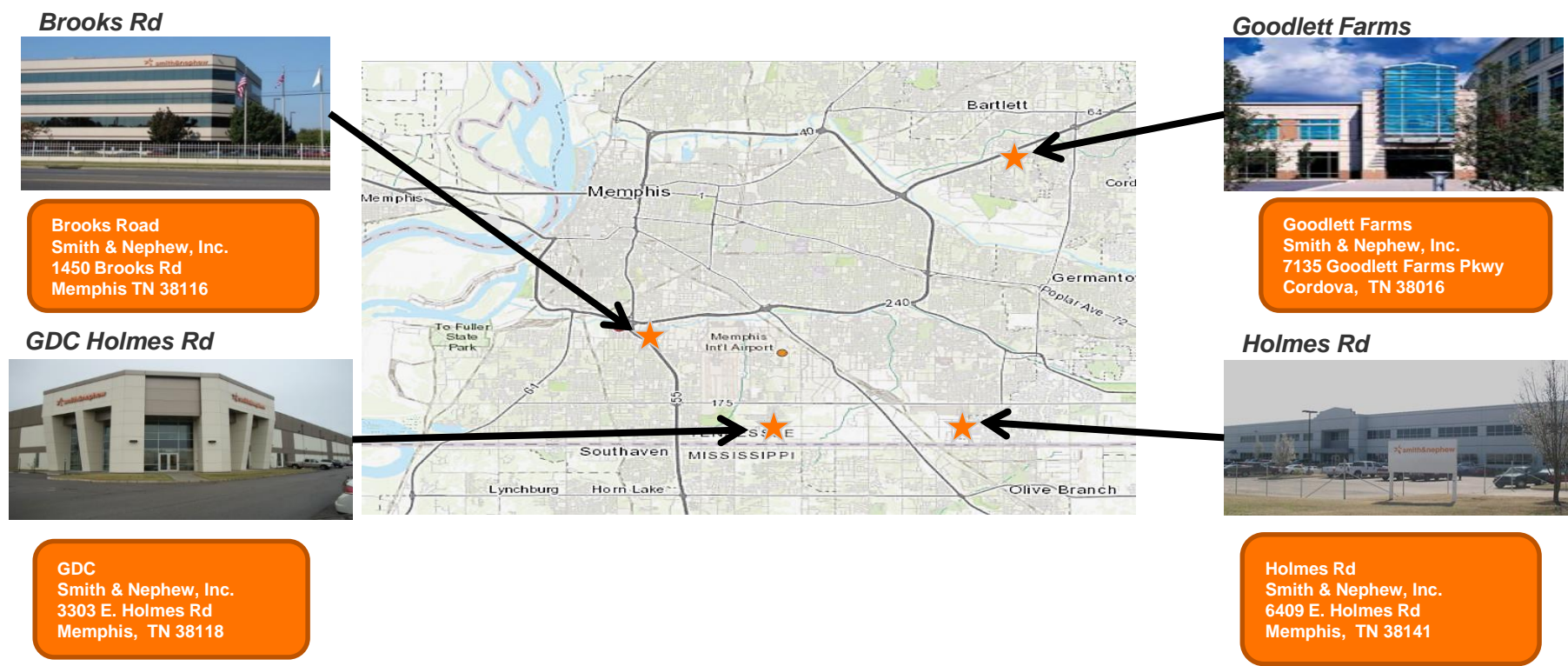
- Manufacture Medical Device Implants
- Employ 2,500+ employees in the Memphis Area
- Processes include Machining, metal parts finishing, cleaning, packaging
- Primary Energy usage from machining operations, compressed air, HVAC systems



Where We Are



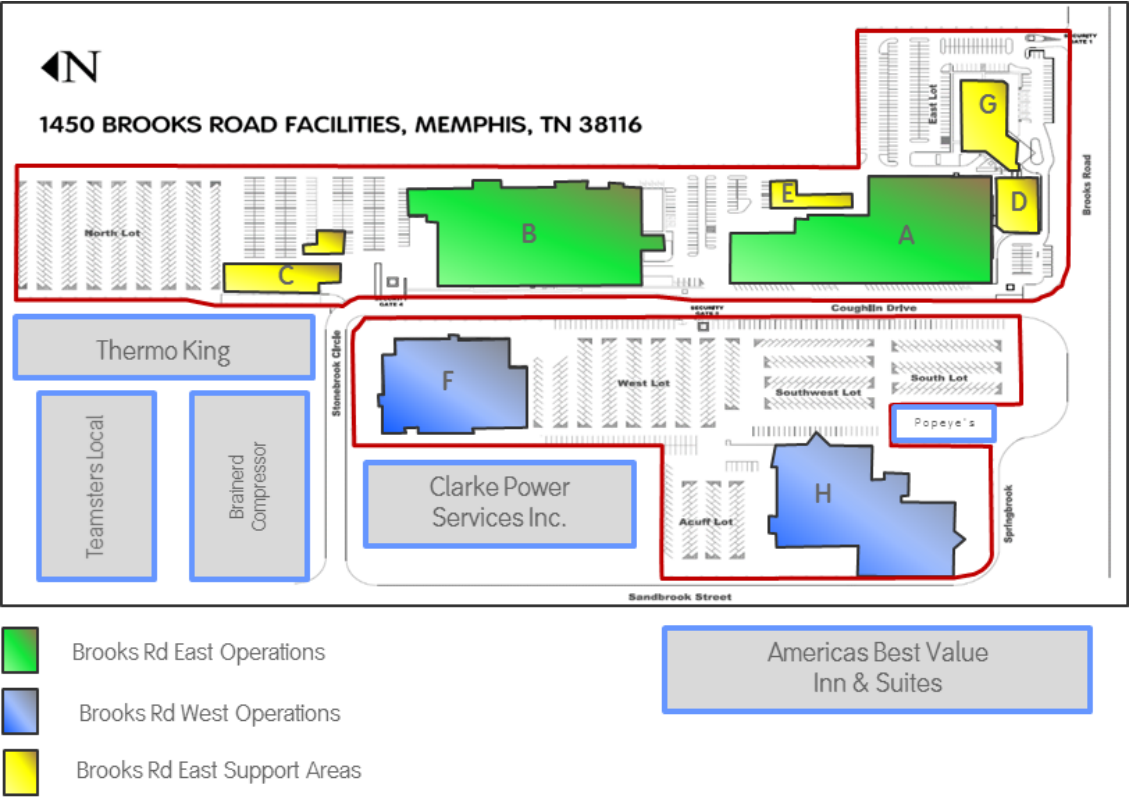
4 Primary Sites Across Memphis



Brooks Road Summary



Campus Overview	
Beginning Date of Operation	1963
Total Number of Buildings	9
Total Campus Acreage	33.95
Total Building Square Footage	
Office	246,900 ft ²
Manufacturing	306,800 ft ²
Total	553,700 ft ²



- Low Hanging Fruit
 - LED lights – Interior and Exterior
 - Occupancy Sensors/Daylight Harvesting
 - BMS – Can I see it and control it
 - Temperature adjustments (Summer & Winter)
 - Utility monitoring – How do I use what I purchase?
 - Utility Bill Auditing



Project – Replace 320 ton Centrifugal Chiller



- B/B+ Bldgs manufacturing had original 450 ton and 320 ton centrifugal chillers
- 40 year old 320 ton centrifugal chiller needed replacement
- Partnered with Trane and Integrity Mechanical to look at options
- 320 ton centrifugal was replaced with 500 ton RTAC (crazy right?)
- Sweet spot for running the RTAC with switch over to 450 Ton is at approx. 75 degree temp (water temp 44)
- Niagara controls were added to optimize operation of VAVs, water temp, fan speed, start/stop of both chillers, **economizers**
- Frequency drives added to chilled water pumps
- Removed cooling tower (water and energy savings)
- Added redundancy for manufacturing operations

500 ton Air Cooled Chiller



- 2018 - Able to run 5 months with full economizer and logged chiller load of <100 tons - Estimated annual savings \$125K



Where do we go from here?



- Opportunity for a central plant
- Plate frame exchangers (free cooling using cooling tower water)
- UV Lighting for HVAC coils – maintain air flow
- Variable speed air compressors
- Power factor monitoring/correction
- Reduce peak demand = lower demand charges
- Monitor water usage cooling towers and liquid processes
- Monitor natural gas consumption



Questions

Smith+Nephew