

Automated capture, creation and publication
of data and metadata
generated on high throughput plant phenomic platforms

The Plant Accelerator[®]

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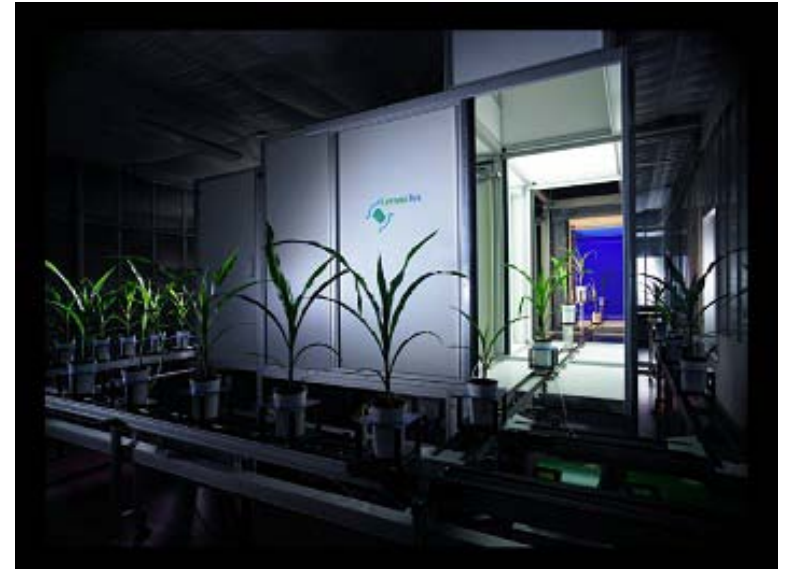
- Home to ~ 1000 staff and postgraduate students
- Collocation of agricultural research institutions (e.g. AFW, CSIRO PI, SARDI, ACPFG, AWRI, AGRF, AGT and more)
- Access to critical mass of expertise in plant and soil science including plant biotechnology, cereal breeding, sustainable agriculture, wine and horticulture, and land management



Grow > 100,000 plants annually in a range of conditions

Fully automated 'Smarthouses'

- plants delivered on 1.2 km of conveyors to five sets of cameras
- high capacity image capture and analysis equipment
- regular, non-destructive measurements of growth, development, physiology

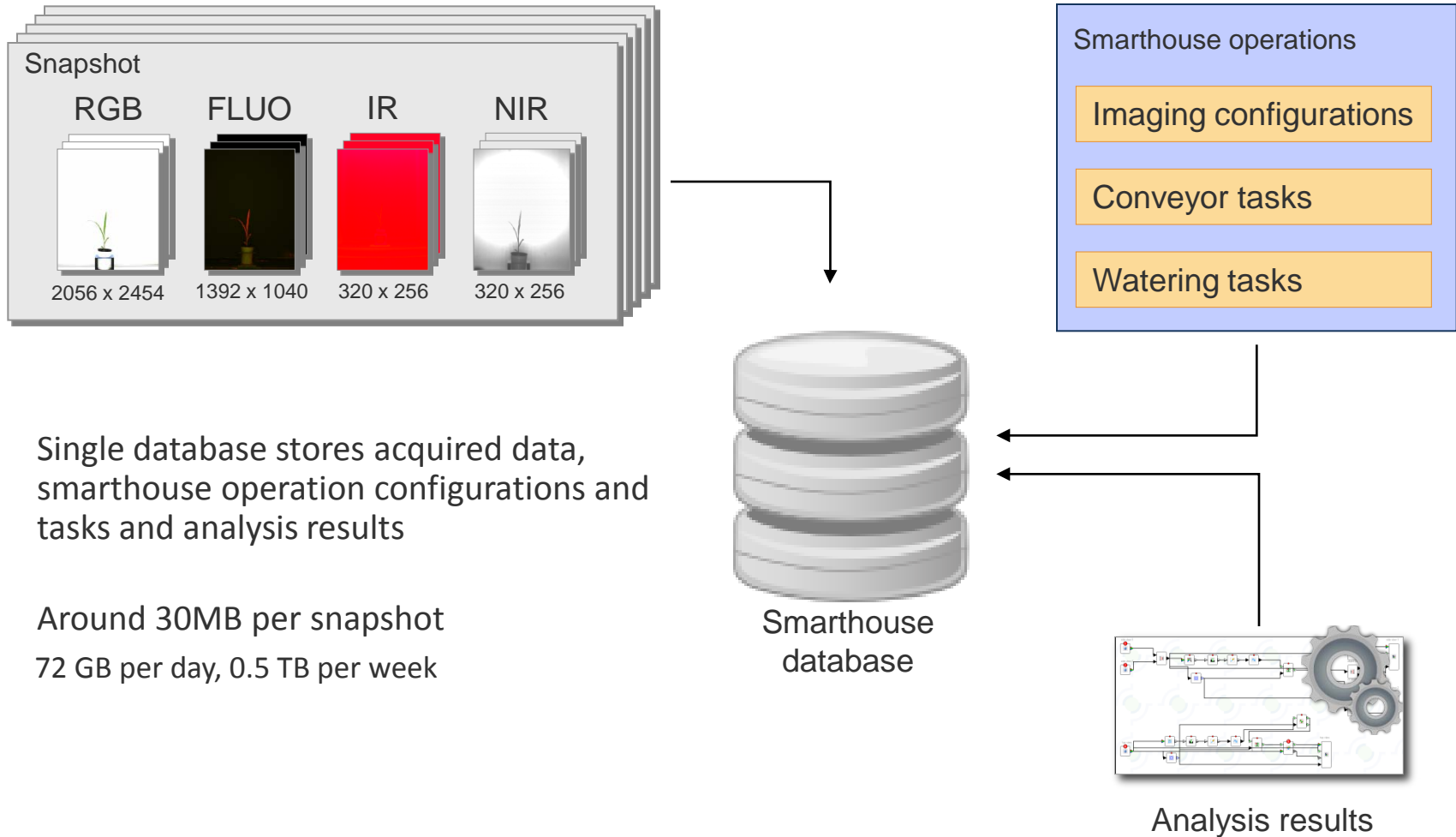


- Hardware configuration
 - 9 physical servers (48 CPU's)
 - 3 blades with 8 CPU's Intel Xeon x 2.5GHz each
 - 6 blades with 4 CPU's Intel Xeon x 2.266GHz each
 - 2 storage controllers
 - 8 storage units
 - 140 x 1 TB hard drives
 - 8 TB NAS storage (offsite backup)



- IBM's Smarter Planet campaign
(reduced power draw – only 10W/per core)

LemnaTec System

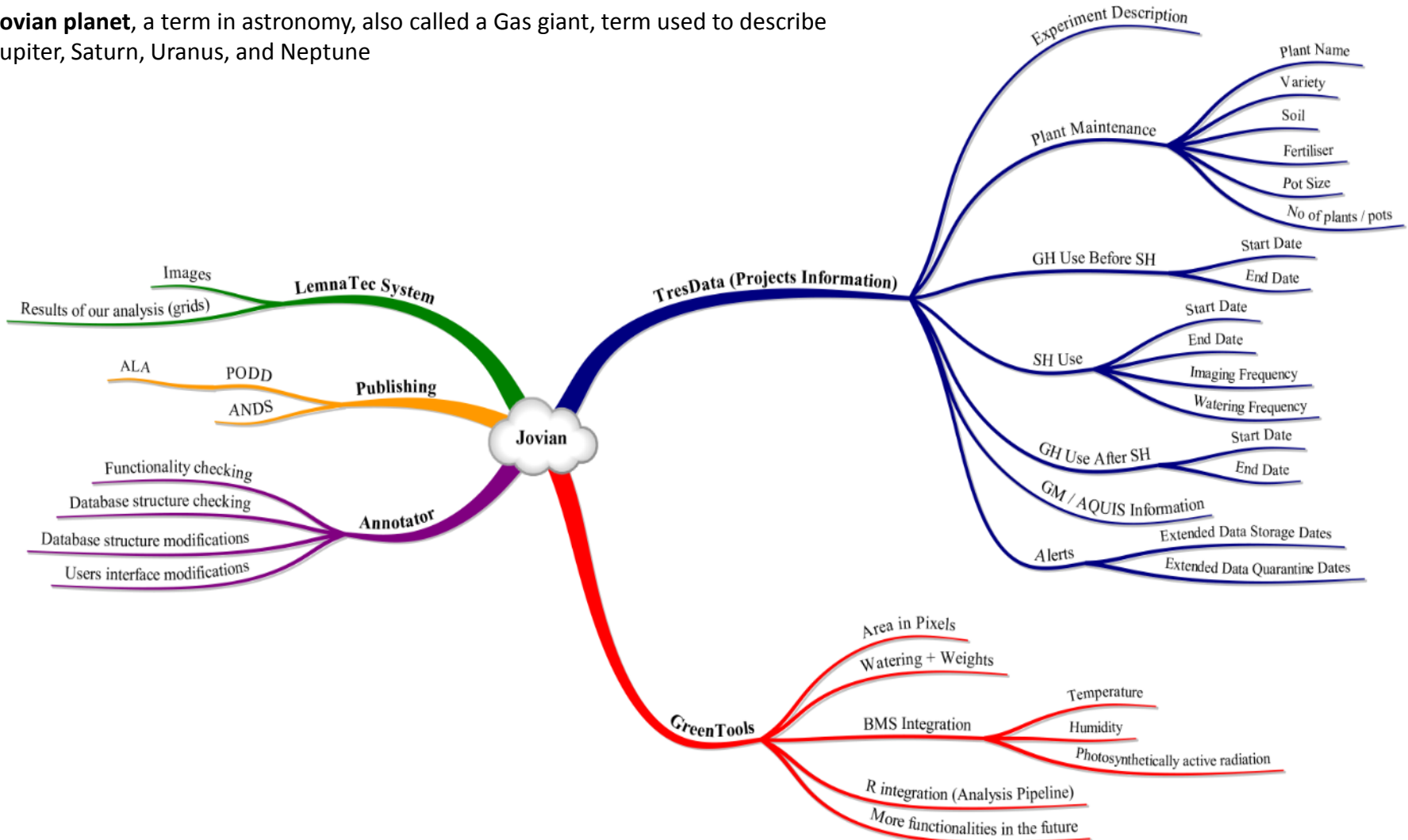


- Single database stores acquired data, smarthouse operation configurations and tasks and analysis results
- Around 30MB per snapshot
72 GB per day, 0.5 TB per week

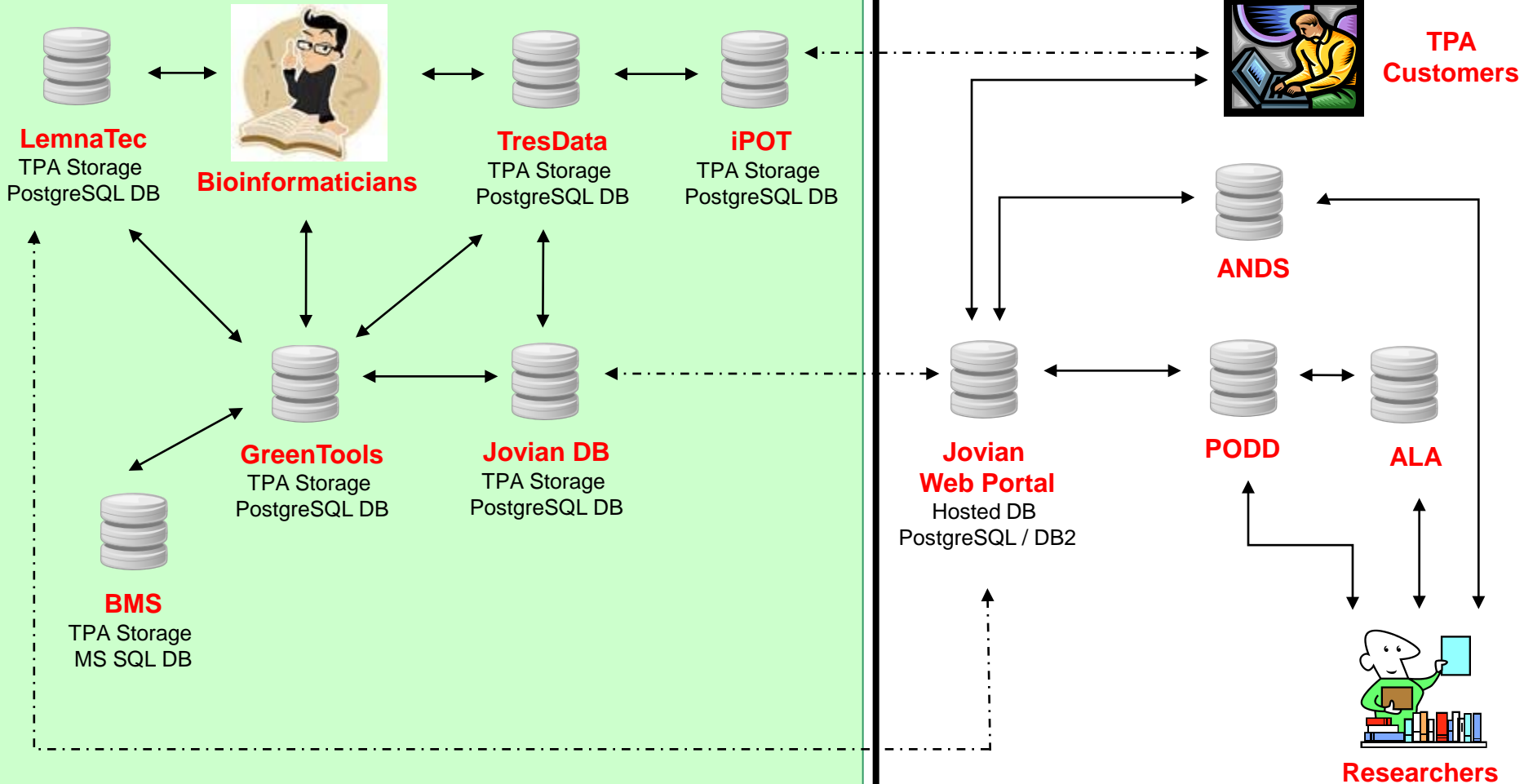
- **Project Level Data Management**
 - all project information in one place
- **Systems Integration**
 - TresData (Multi Relationship Management)
 - Booking System (iPOT) + Seed Store Maintenance
 - LemnaTec Solutions
 - RC Archive (Building Management System)
- **Image and Data Analysis**
- **Data Publishing**
 - JOVIAN (TPA Portal)
 - ANDS (Australian National Data Service)
 - PODD (Phenomics Ontology Driven Data repository)
 - ALA (Atlas of Living Australia)



Jovian planet, a term in astronomy, also called a Gas giant, term used to describe Jupiter, Saturn, Uranus, and Neptune



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