



DiPAR
SYSTEMS

Flexibility with Control

Plant Production

Presented to

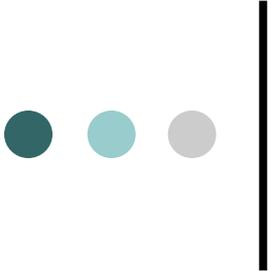
IPPS
SHARING PLANT PRODUCTION KNOWLEDGE

Wednesday, 02 March 2016

Why is  at  ?

 ARNELIA

Plant Production



Agenda

1. DiPAR Systems

- Who is DiPAR Systems
- Our Product Suite

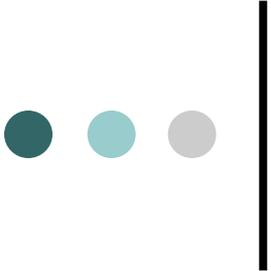
2. What is required to build a System?

3. How do you get value from a System?

4. Plant Production



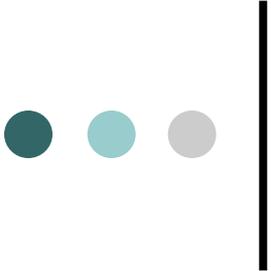
DiPAR Systems



Who is DiPAR Systems

- DiPAR Systems is a **Technology Solutions** Service Provider
- Based in **Bellville**, Western Cape, South Africa
- In Existence as a Independent Company for **14 Years**; Previously Part of Comparex Africa (dating back to **1992**)
- **35** Full Time Employees
- Focus on **Long-Term Client Relationships**



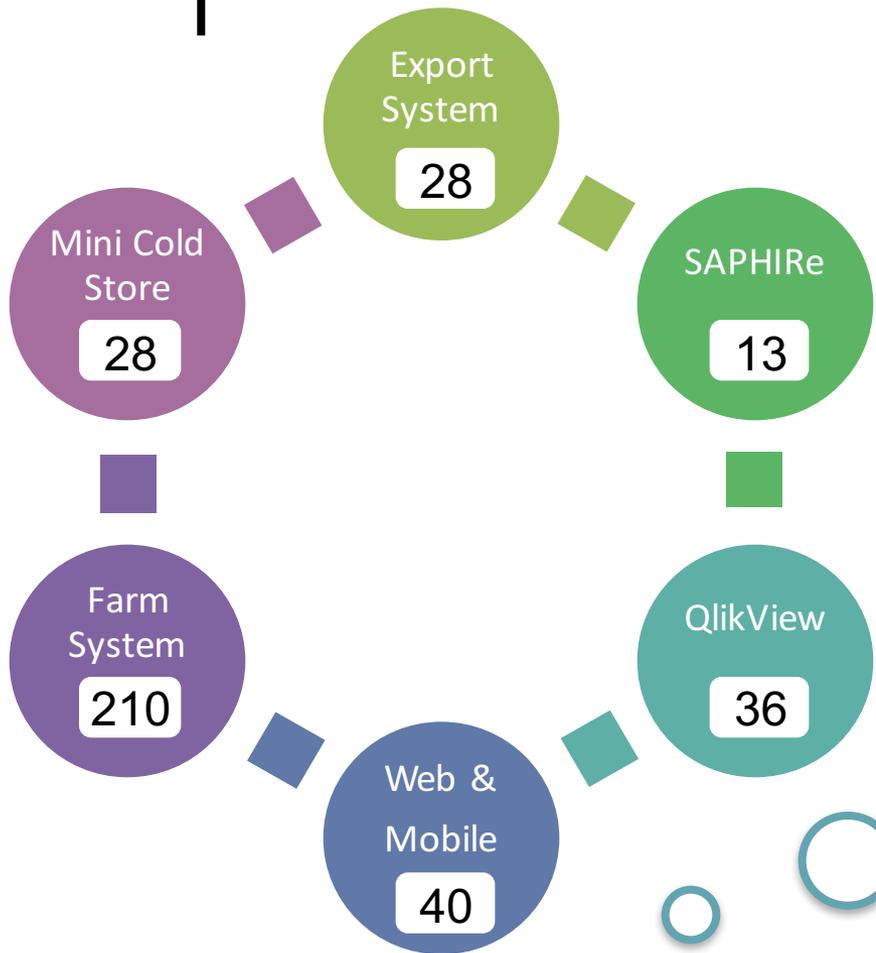


Who is DiPAR Systems

- Mostly Work in **Fruit** Sector of the Agricultural Industry – Also Work(ed) with **Wine**, **Flowers** and **Vegetables**
- **Clients Include:**
 - Breeders, Variety Evaluators , Nurseries, Farms, Pack Houses, Cold Stores, Exporters, Inspection Agencies, Government Organizations, Sterile Insect Technologists & Importers
- **300+ Sites** Across the **World**
- In **8** Countries on **5** Continents



Product Groups



Statistics

- 120+m 5KG Cartons of Fruit Going Through Export System Per Annum
- Biggest QC Day > 1m Cartons Inspected
- Systems From 'Breeder to Arrival'

Product Suite

Web & Mobile

Quality Control
Variety Evaluation
Labour Productivity
Pest Monitoring Plant
Production
PPECB Inspection



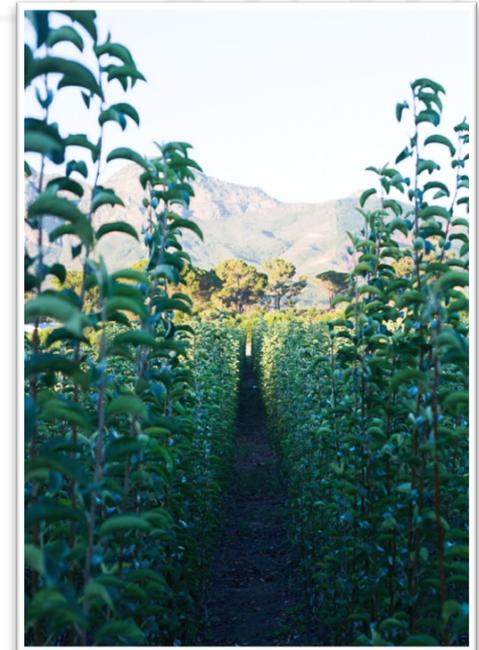
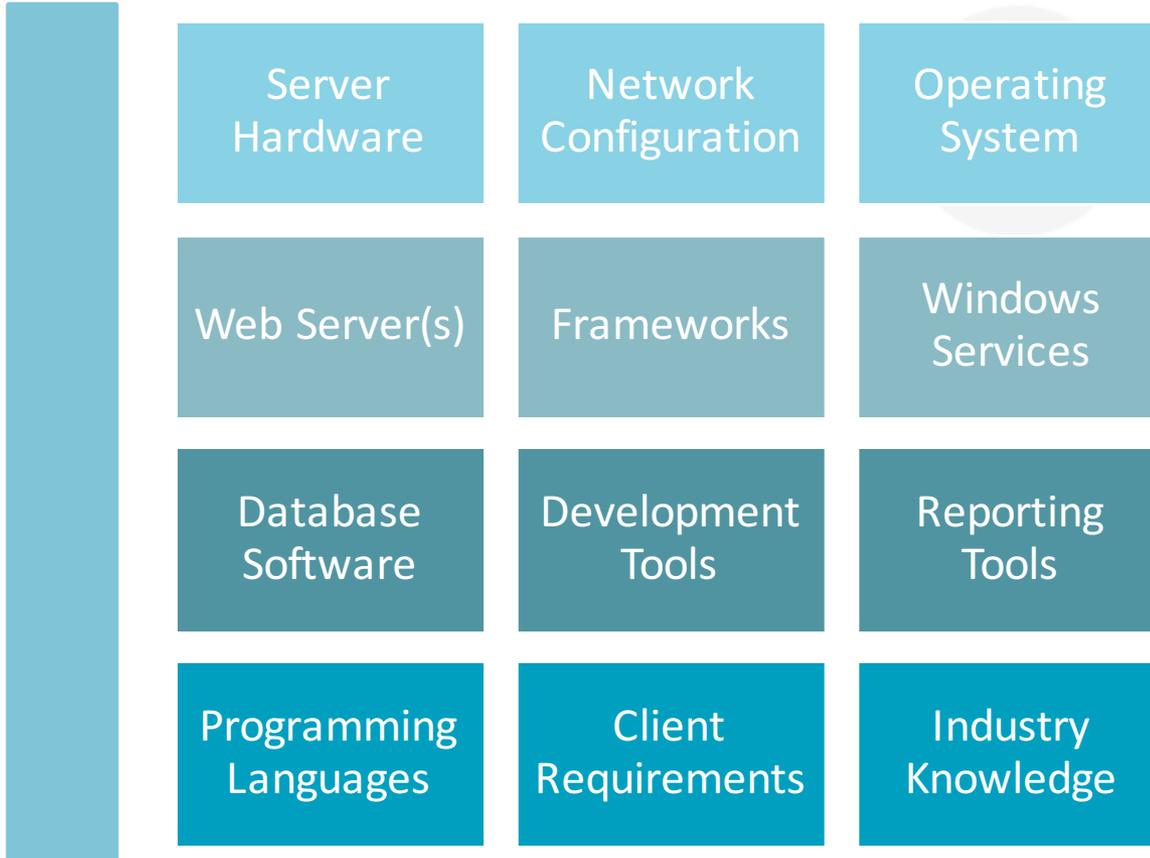
● ● ● | **Global** Deployments

Mexico Australia
The Netherlands
Spain Hong Kong
North America
Belgium South
Africa Namibia



What is Required

System Components & Dependencies



System Components & Dependencies

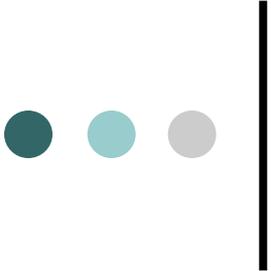
RAM CPU HD Space A Records DNS
VPN RDC Windows Server Java SDK
Tomcat .NET Java Runtime Apache
IIS MS SQL Server MySQL MS Visual
Studio MS TFS DragonRAD Visual
Basic 6.0 HighCharts Bootstrap
JQWidgets Angular.JS Node.JS Lua
C# HTML5 CSS3 Razor Web API
Membership SQL Eclipse Gembox
XML CSV PDF Excel JSON ASP.NET
Redgate Source Control SQL
Compare SMTP Android 4+ Signal R



Challenges

- “Train people well enough so they can leave, treat them well enough so they don't want to” *Richard Branson*
 - Multi-Skilled Development Team
 - Attract, Retain and Maintain Skills
 - Cost of Licensing and Skills Management
 - Cost of Testing Dependencies and Managing Versioning
- Commercialize the System
 - Catering for Bespoke Client Development in a Niche Market
 - Developing and Maintaining the Specific Client & Industry Requirements

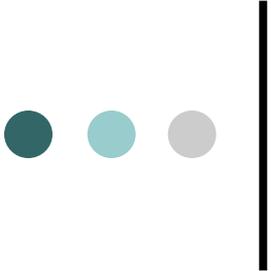




Design Approach

- Method
 - Agile Software Development Approach Using (Parts of) Scrum Methodology
 - Implement Continuous Integration in the Long Term
- Process
 - Everything Starts with the Database (What Data to Capture)
 - Foundation to the System Design
 - First Part to be Designed and Developed
 - Workflow Mapping
 - Order of Tasks
 - Interdependencies Between Tasks





Design Approach

- Process (continued)
 - **Business Logic** Required
 - Requires an Understanding of the Clients Needs
 - Requires an Understanding of the Industry
 - **User Interface** Design
 - Look and Feel
 - “Right Tools for the Right Job”
 - **Build the System in Phases**
 - **Roll Out in Phases** for Beta Testing
 - Manage Phases and Versions in **Sprints** and **Source Control**

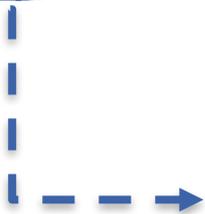


Systems = Value ?

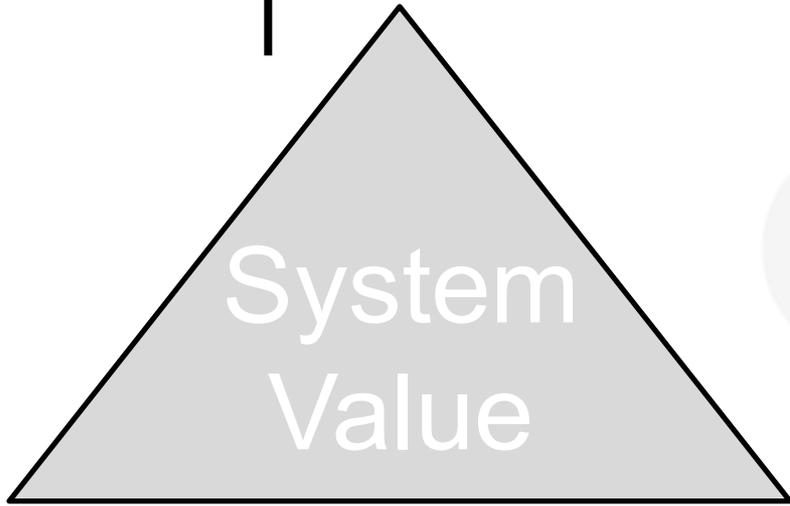


True

Value from Systems



● ● ● | **True** Value from Systems



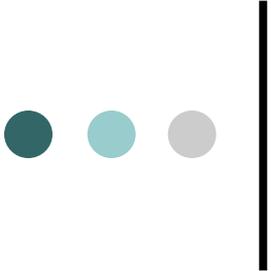
Hardware

Software

People

Processes



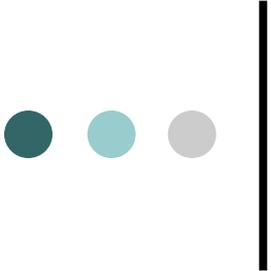


True Value from Systems

- Hardware & Software
 - This is the **easy** part of the software development life cycle and system deployment
- People & Processes
 - This is the part that determines the **true** value for a client
 - The **system in isolation does not create value** or deliver a competitive advantage; **it's how the client uses the system** that creates these benefits
 - “Rather implement the wrong system with the right people, than the right system with the wrong people” *Bill Gates* *
 - Starts with management; ends with system users



Plant Production



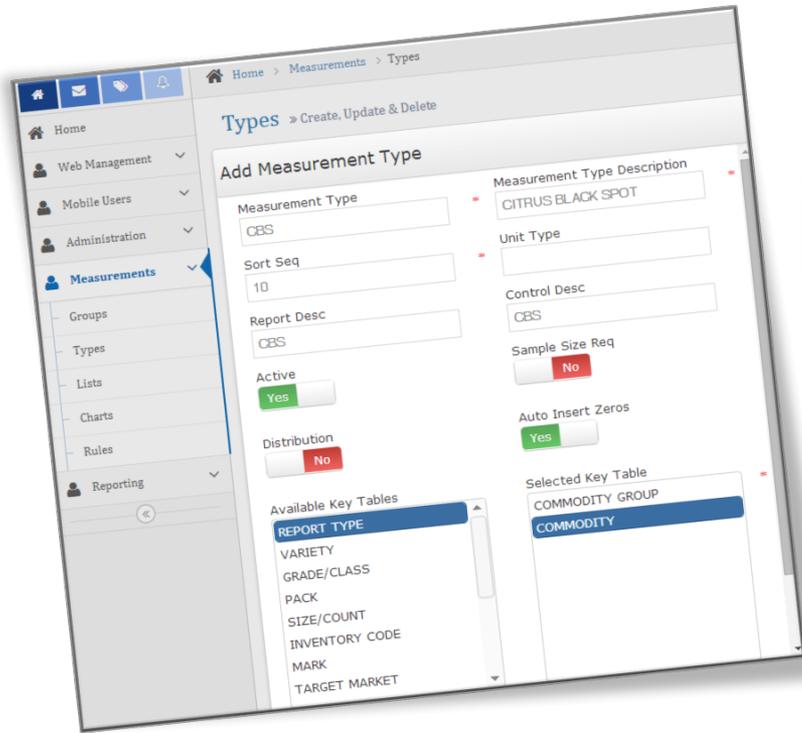
PPS

Unique & Interesting Elements

- Initial **Interest** Shown
- Make **Planning Data Support** and **Feed Operational Data**
- Multiple **Overlapping Seasons/Cycles**
- Creating Something From 'Nothing', i.e. **Propagation**
- Multi Layered Locations
- **Terminology**
 - Jiffy, Bulb, Cutting, Motherstock, IBA Concentration...
- **Structured Flexibility** or *Flexibility with Control*



System Pillars



integrated
web
access



● ● ● | **System** Pillars

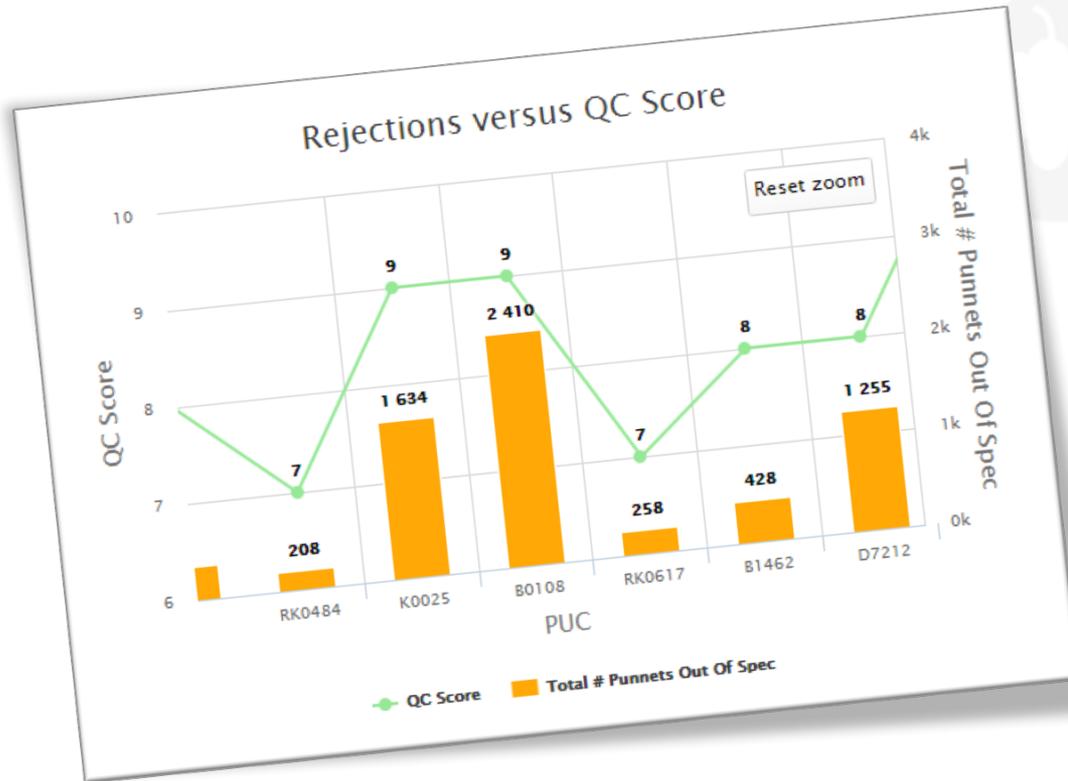


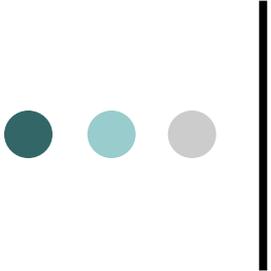
easy
mobile
input



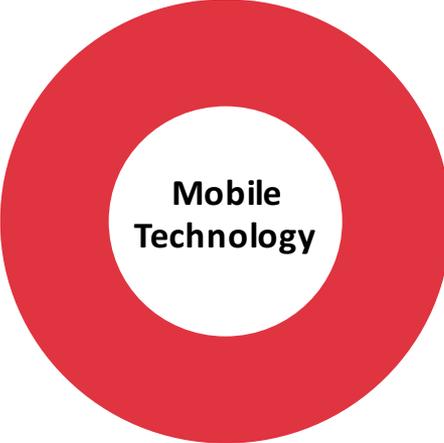
System Pillars

automated
flexible
output





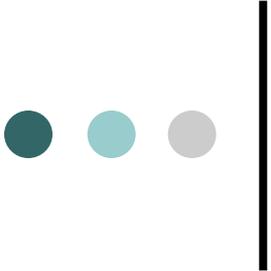
Main Features



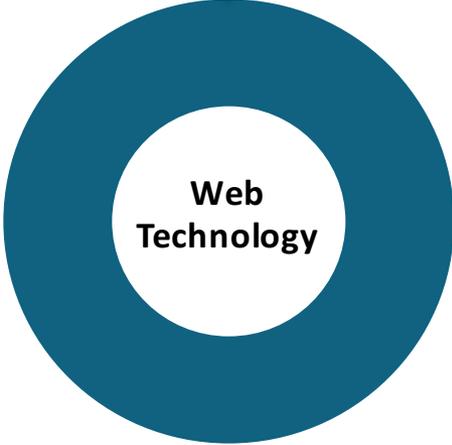
Mobile Technology

- ✓ Android Based (*iOS in Roadmap*)
- ✓ Work Completely Offline
- ✓ Scan Barcodes
- ✓ Pictures with Comments
- ✓ Automatic Resize and Rotation of Pictures





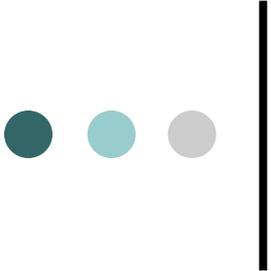
Main Features



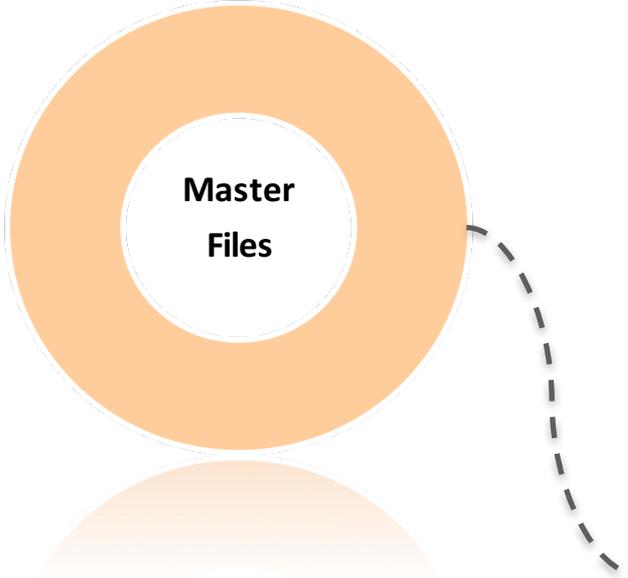
Web Technology

- ✓ Cross Platform Web Component
- ✓ Database Integrated
- ✓ ASP.NET MVC5
- ✓ HTML5 & CSS3
- ✓ Entity Framework
- ✓ C# and Java Script





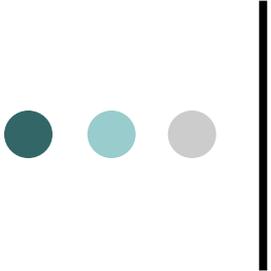
Main Features



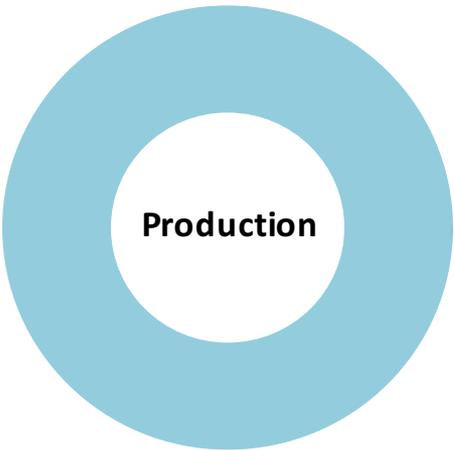
**Master
Files**

- ✓ Custom Product Setup
- ✓ Custom Container & Capacity Setup
- ✓ Custom Multi-Layered Location Setup
- ✓ Custom Tasks, Sub Tasks and Task Parameters



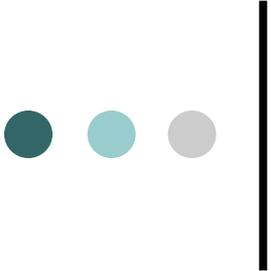


Main Features



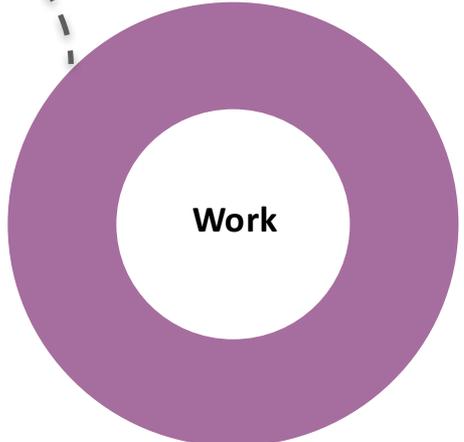
Production

- ✓ Setup Production Plans per Sales and Propagation Season
- ✓ Setup Production Lines
- ✓ Setup Production Steps per Production Line
- ✓ Define Sub Task Parameters and Values per Production Step
- ✓ Configure Production to be Re-Useable Across Seasons

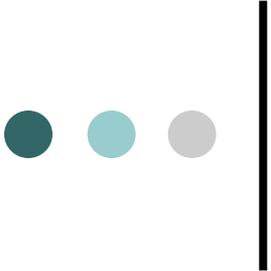


Main Features

- ✓ Generate Work Schedules per Week
- ✓ Modify Work Schedules in Web and Mobile
- ✓ Allocate Task to Individual Employees or Teams in Work List
- ✓ Employee can Capture Work Done in Web or Mobile *

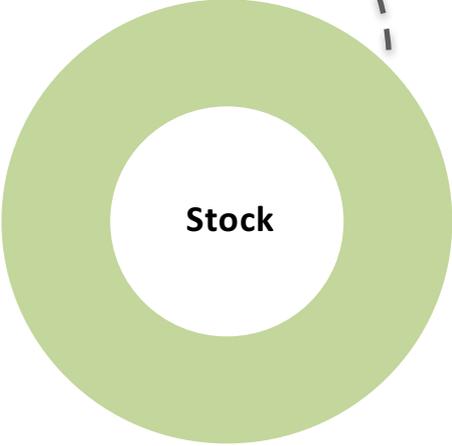


Work

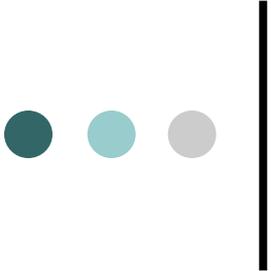


Main Features

- ✓ Manually Capture and Adjust Stock
- ✓ Automated Integration Between Stock and Work Schedules
- ✓ Automated integration Between Stock and Work Done *



Stock

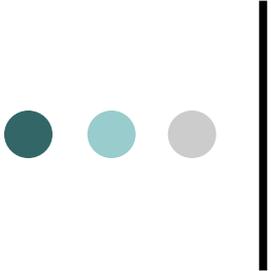


Main Features



Custom Reporting & Automation

- ✓ Setup Custom Reports
- ✓ Pivot & Standard Tables
- ✓ Multiple Chart Types
- ✓ Custom Automated Reports
- ✓ Online Report Access
- ✓ Allow External Stakeholders
Access to Reports
- ✓ [Online Dashboards](#)



Thank You

