

"R5 Digital Package Design" for Analytically Driven Leadership





#### Introduction to Functional Breakthrough

- Lx Tech Global Services LLC (Lx Tech) is based in Sharjah, UAE.
- In last 8 Years, Lx-Tech team has built a data science analytical suite "R5" on Qlik Sense/Power BI configured for Infor LN Cloud suite or On Premise Customers.
- Experts of enabling Data Science Framework, CRISP-DM Framework and Data Governance framework in an organization for data driven culture.
- The R5 package has been designed carefully to answer prevailing questions of manufacturing business and facilitates decision making on the fly. The package is preintegrated to all major areas of Infor LN and designed to show single point of truth.
- The key unique aspect of R5 solution is plug and play. The pre-built dashboards would be available right from few weeks of implementation without any waste of time of Customers team for requirements and follow-ups with various consultants.
- This will raise the collective intelligence at Customer site and binds entire team to most critical business requirements.
- The ROI realization starts in weeks time and it enables digitization platform which can be extended to newer concepts of Brilliant Manufacturing.



### Addition of Data Science function will enable maximum utilization of Data

High

Complexity

Static

What Happened?

Reporting

**Dynamic Analytics** 

Why It happened?

Analytics

Executive Analytics
Production Analytics
Service Analytics
Supply Chain Analytics

**Auto Analytics** 

What is Happening?

Monitoring

Real Time Auto
Analytics App

**Highly Algorithmic** 

What will Happen?

**Predictions** 

**Forecasting Predictive Cost Analytics** 



		Reporting	Analysis	<b>Decision Support</b>	Monitoring	Prediction
Role	Dashboards	What Happened?	Why it Happened?	What we should do now?	What's Happening now?	What will Happen?
Board Members/Group CEO/CEO/CFO	50	Business Evolution App	Visual Analytics & Guided Trends	Executive Master Analytics	Real Time Auto Analytics	Forecasting & Budgeting
Receivables Manager	10	AR Analytics	AR Aged Invoices Analytics & Guided Trends	Credit & Collection Assistance	Daily Overdue & Credit Visualization	Forecast Collection, Provisions and Bad Debts
Payables Manager	10	AP Analytics	AP Aged Invoices Analytics & Guided Trends	Budget Control & Buy to Order Assistance	Daily Over budgeted Visualization	Forecast Payment Analytics
Cost Accountants	10	Order Margin Analytics	Budget Vs. Actual Cost Analytics & Guided Trends	Resources Consumption Control	Real time resource consumption	Over Variance Assistance
Expense Manager	10	Expense Analytics	Budget Vs. Actual Expense Analytics & Guided Trends	Expense Variance Control	Real time Expense Visualization	Expense Planning
Financials	10	IS and BS Analytics	Budget Vs. Actual Finance Analytics & Guided Trends	Target Variance Control	Real time budget vs. Actual on Financials	IS Forecasts

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Sales Manager	50	Sales & Customer Evolution App	Dynamic Sales Analytics & Guided Trends	Sales Target Control & Growth Analytics	Real Time Actual Sales Analytics	Sales Forecasting
Planning Manager	10	OTIF Analytics	Order Delay Analytics	Backlog Management	Schedule Execution Control	Forecast Order Delivery
Inventory Manager	10	Inventory Historic Trends	Inventory Aging & Guided Trends	Order Planning Analytics	Current Inventory Aging and Stock Out Control	Forecast Inventory Analytics
Production Manager	10	Production & Capacity Trends	Production and Product Guided Trends	Production Target vs Actual Analytics	Real time Production Analytics	Backlog Load Management
Maintenance Manager	10	Machine Breakdown Trends	Maintenance Analytics & Guided Trends	Machine Downtime Control	Real time Machine Visualization	TPM Planning
Delivery Manager	10	OTIF			Delivery Schedules Analytics	

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Role	Dashboards	What Happened?	Why it Happened?	What we should do now?	What's Happening now?	What will Happen?
Project Manager	50	Project Analytics	Delay Indicators	Resource and Task Schedules	Real Time Auto Analytics	Forecasting for Project
Procurement Manager		Procurement Analytics	Procurement Trends	Budget and Actual Drills	Real Time On Arrival Analytics	Open PO Analytics
Quality Manager		Inventory Historic Trends	Inventory Aging & Guided Trends	Order Planning Analytics	Current Inventory Aging and Stock Out Control	Forecast Inventory Analytics
HR Manager		HR Analytics	HR Trends and Guided Analytics	Performance Management	Real time KPI's	Resource Planning
Payroll Manager		Payroll Analytics	Payroll Trends and Guided Analytics		Payroll Dashboard	
Skill development manager				Skill & Training Management		



# Lx-Tech Business Consulting Example – Production Manager Appraisal on Daily OEE & Waste Target

As Lx-Tech we would like to implement end to end solution that impacts business performance





# R5 & Lx-Tech Implementation methodology Understanding

- As per Lx-Tech, R5 is the level for the benchmarks. A company must achieve to be ready for the digital revolution.
- Lx-Tech has detailed set of enterprise benchmarks for all business domains (One implementation example shown in this document)
- R5 & Lx-Tech implementation methodology is different than usual—
  - Business KPI definition
    - Define business KPI that will be monitored and performance of this KPI will decide Appreciation of team.
  - Infor LN Implementation
    - Infor LN Best practices for the chosen KPI's
    - Business Processes, data flows, data architecture, data authentication, data approvals to ensure single point of truth
    - Machines R5– (Currently not in Scope) -Connected machines integrated to ERP for online data for real truth
  - Analytics
    - Qlik Sense prebuilt modeling with Infor LN for Real Time Auto Analytics
    - Highly interactive and state of art In memory solution for high-speed information feeds
    - On the fly report displays



#### Step 1 – Define KPI

- OEE % is the Productivity measure that
  - Lowers product cost and hit bottom line business heavily
  - Increases production for on time deliveries
  - Huge Impact on breakdown cost, overhead cost

OEE Category	Preventable Losses if OEE is high		
Availability %	Breakdown losses caused by the equipment		
(Availability of machine)	Set-up and adjustment losses		
Efficiency %	Minor stoppage losses		
(Speed of Machine)	Speed losses		
Quality %	Quality defect and rework losses		
(Quality of Output)	Yield losses		



### KPI Definition (OTIF Level 2)

KPI Name:	OTIF Level 2
UOM:	%
YTD Calculations	number of deliveries YTD meeting OTIF ÷ total number of deliveries Ytd * 100
KPI Definition	OTIF (On-Time In-Full) is a measurement of delivery performance within a supply chain. it measures whether the supply chain was able to deliver:  > The expected product (reference and quality)  > In the quantity ordered by the customer  > At the place agreed by the customer  > At the time expected by the customer (in many cases, with a tolerance defined in conjunction with the customer).  OTIF (%) = number of deliveries meeting OTIF ÷ total number of deliveries * 100



### **KPI Definition: Total Maintenance Cost**

KPI Name:	Total Maintenance Cost (TMC)
UOM:	TMC SAR/unit of shipping
YTD Calculations	Year to date cost over YTD volume
KPI Definition	<ul> <li>Maintenance cost is the sum of all costs needed to perform planned maintenance or breakdown solving. That includes:</li> <li>Cost of spare parts, preventive and corrective maintenance.</li> <li>Cost of Repairing tools</li> <li>Cost of PLC software's licenses, renewals or upgrades.</li> <li>Cost of contracted service to perform a routine or one time maintenance activity or technical consultancy.</li> </ul>



#### Step 1.1 – Define OEE Machine Availability Failure Modes

- Level 1
  - Shutdown
  - Autonomous Maintenance
  - Preventive Maintenance
  - Make Ready
  - Quality
  - Waiting
  - Operational
  - Quality
  - Electrical
  - Mechanical
  - Utility
- Level 2 with detailed reasons like electricity off



#### Step 2 – Implement Process in Infor LN

Process Steps	MES system or Infor LN	Infor LN Functionality Availability %	Lx-Tech Add On Available
Start Production Run	Infor LN	Partially (80 %)	Yes
Input Material to Run	Infor LN	Partially (90 %)	Yes
Output Material to Run	Infor LN	Partially (90 %)	Yes
Time details based on OEE Failure modes	Infor LN	Partially (60 %)	Yes
Quality of Output for Run	Infor LN	Partially (90 %)	Yes
Performance of Machine	Infor LN	0 %	Yes
OEE & Waste by Shift	Infor LN	0 %	Yes
OEE & Waste Approval by supervisor	Infor LN	0 %	Yes



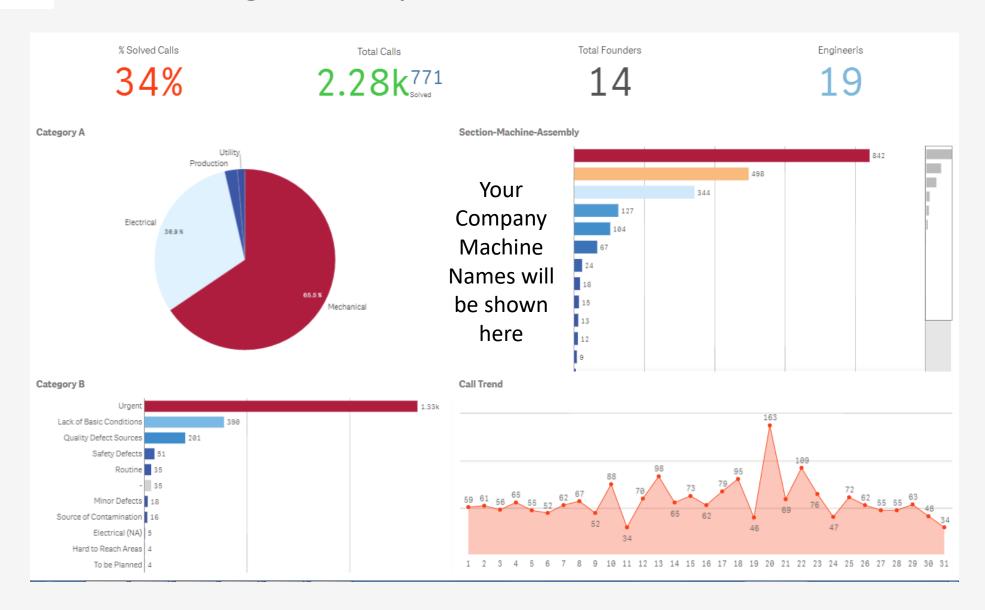
# Step 3 – Live Streams of KPI for top management

- OEE Published to Data Model
- Live Stream of Daily OEE and Daily Waste to TV screen on Shop Floor, GM Office, CEO
   Office, Group CEO Office





# Step 3.1 – Detailed Analytics for Production manager to improve (80:20 rule assistance)





#### R5 Projects Ready with Lx-Tech

All Phase (Business Consulting, Infor LN and Qlik Sense BI)

NO	Name	Benefits
A01	HDS TV Streaming (All Business Domains) 20 sec auto flip to next screen on a 50" Screen for CEO	Real-time Business Information on important KPI's Sales, Collections, Sales Pipeline, Net Income, EBITDA, Receivable, Payable, Inventory, Days Sales Outstanding, Days Payable Outstanding, Non performing Inventory, Days Inventory on hand, Production tons, waste, CCR, OTIF, OEE
A02	CFO Apps for IS, Balance sheet, Month closing, Working Capital and KPI's	Financial KPI's, Receivable Analytics, Bad Debts Management, Payable Analytics, Inventory Analytics, Expenses analytics, Credit Note Analytics, Collection Analytics, Income statement, balance sheet
A03	Sales and CRM	6 dimension comparative study for Why Sales is down- Last Year, Customer, Regional, segmented, sales manager etc. Customer Dashboard, Pipeline Dashboard
A04	Production Analytics - Cost, Cash and Service	Order Profitability, Production variances analytics, Detailed analytics of OEE, OTIF and CCR. Costing Dashboard
A05	Machine Defect Control / Preventive Maintenance / Service Costs	Machine breakdown maintenance analytics Machine defect control analytics Machine preventive maintenance schedule Machine downtime analytics



#### R5 Projects Ready with Lx-Tech

All Phase (Business Consulting, Infor LN and Qlik Sense BI)

Serial	Name	Benefits
A06	Warehouse Analytics	Fast Moving Inventory management (Avoid Stock outs) Non Performing Inventory Analytics (Dispose or Sell) Inventory Aging and others
A07	Procurement Analytics	Supplier Analytics Supplier Rating on Cost, Quality and Delivery Customs Duty management Purchase order workflow approval lead time analytics
A08	HRMS Analytics	Cross Analytics for measures like Headcount, Resigned, Terminated, New Joinee and dimensions like Position, Age, Country Grade, Gender, Saudi's etc. People Diversification (Country)
A09	Payroll Analytics	Standard Payroll by month. Company analytics for payroll
A10	PMS (Performance management, Learning Management)	Objective Setting for Employees Performance results by quarter Learning plan wrt allocated courses by reporting manager Course attendance



#### Risk Management System

Function /Domain	Infor LN Add on Solution	R5 Analytics Benchmark
Risk Management System	<ul> <li>Strategic Objectives (3 Levels)</li> <li>Operational Objectives (3 Levels)</li> <li>Risk Main Category</li> <li>Risk Subcategory</li> <li>Risk Universe</li> <li>Estimating Impact 5 Levels</li> <li>Risk Register</li> <li>Risk Register</li> </ul>	Risk Management Analytics covering all functions with 8 Dashboards Risk Heat Map Strategic Risk Register
	Risk Treatment	



#### **Overall Technology Plan**

#### Be a Target Driven & lean organization

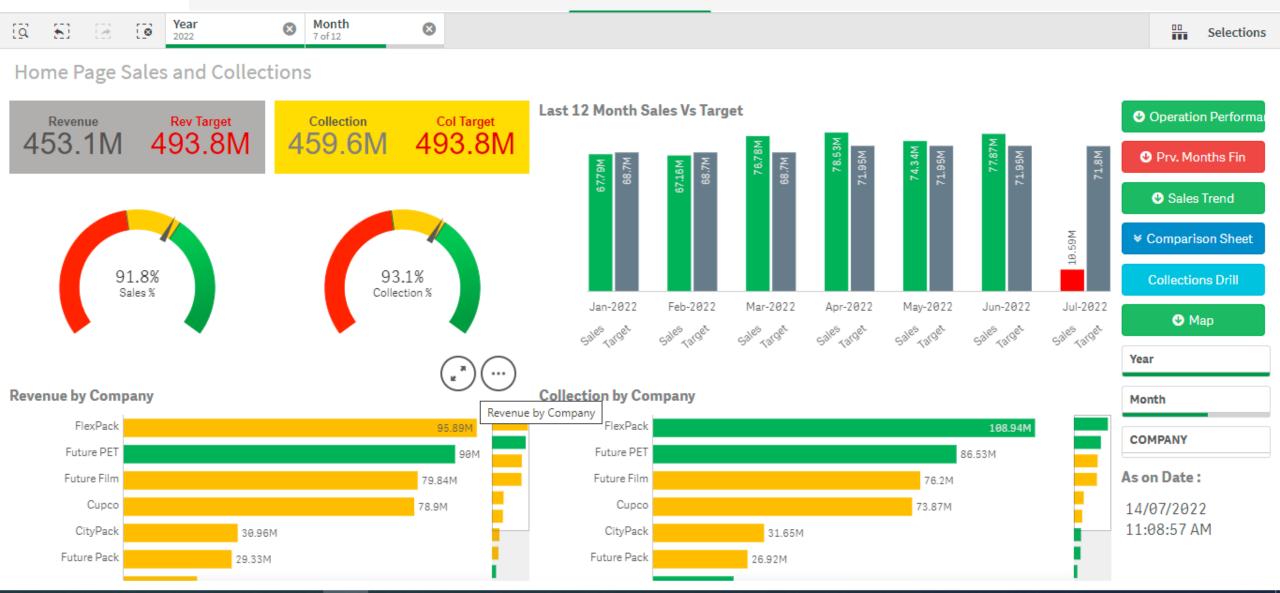
- Enable daily targets shown digitally (Current Scope ERP/Qlik)
  - Balance high volume low profit sales & High profit low volume sales
  - Reduce Cost per ton with controlled expenses and material waste
  - Increase Collections, restrain credit limits to lower bad debts
  - Increase OEE Viz. Productivity
  - Increase On time/In Full/On Quality Delivery
  - Lower Customer complaint records
  - Lower Non performing Inventory (Enable Purchase Schedules/JIT)
- Win Customers trust with Customer Portal
  - Enable Customer to enter there sales orders in customer portal to free your sales team
  - Let your customer see production status and overdue etc.
  - Let your customer enter feedback, complaints etc.
- Save your human hours
  - Enable suppliers To Get PO, update purchase receipt and send invoices through supplier portal to save human hours spent by payable team and warehouse team
- Promote and appraise team who meets the target

### Brilliant Manufacturing KPI Driven Apps





#### State of Art Visualizations





#### Why Digitization in Reporting?

## Digitization can save 60 % of current time invested by managers

#### Digital

- Digital Customer Experience
- E2E Digital Supply Chain
- Free from Excel/Power Point

#### **Target Driven Culture**

- Set Objectives & Targets for each function
- Performance appraisals on actual measures

#### **Auto-Analytics**

- Role Based monitoring for
- What Happened?
- Why did it Happen?
- What is happening now?
- What will Happen?



#### Why We?

- We are experienced to Automate and digitize all processes in ERP
  - Experience in creating Reliable data model viz. single point of truth
  - We know what will make ERP Utilization high
  - We Automate processes upto minimum possible User-ERP interactions
- Our Objective is to Dehumanize all business reporting
  - We have Pre-built best practices, dashboards on TV Screens for every area
  - We can make 100% Excel and Power point free organization
  - To concentrate on solutions and eliminate debate over numbers
  - For Hourly Evaluation of organization and individual performance
- We believe in Engaging people for organization targets
  - To make team perform on dynamic target settings and glide paths
  - For Transparent performance appraisals
  - For Interactive visual data discovery for the solution
  - Highly Interactive and super fast analytics engage people
  - Increase IQ and business knowledge of individuals
- Elimination of Meetings and phone calls for status updates
  - Organization culture will be to achieve daily target

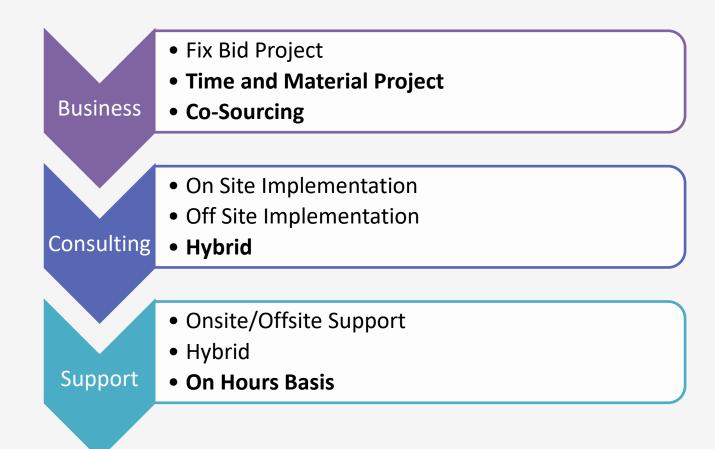


#### Value Proposition

- Digitization in Reporting will make the organization lean, informed and right on track to hit the bottom line.
- ROI starts right from 2<sup>nd</sup> month of project
- It is experienced that after successful implementation of processes explained in the document. Below roles would be automatic and free human mind for better work in below areas -
  - Cost Accountants
  - Cost Analysts
  - Business Analysts
  - Report developers
  - excel and power point operations
  - People Independent processes



#### **Engagement Models**





### Thanks Lx-Tech Team

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