Production Process can be treated as the CES of the Model because it will deal with the contexts gathered from various IoT devices.

Icon Logic and CES Representation:

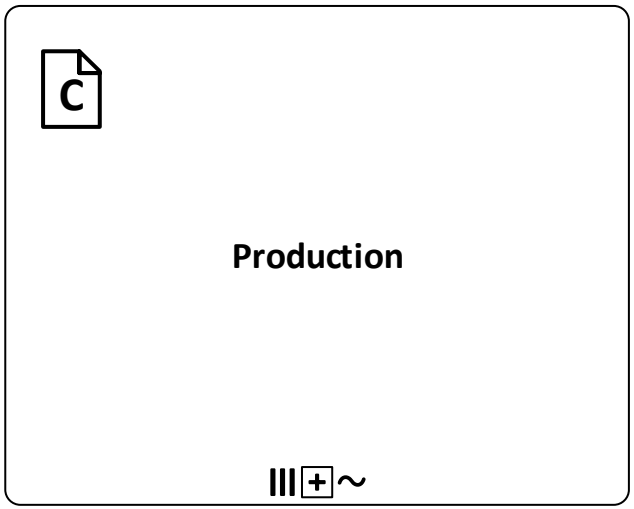
This Visual Representation of Icon can be seen as multiple contexts being sensed and a path to the output is chosen dependingupon the context. The Icon is a Data Object with C written that signifies that this is a process that depends upon the Contextual Data received from IoT devices.

Iconic representations speed up recognition and recall and improve intelligibility of diagrams to naive users. They also make diagrams more accessible to novices: A representation composed of pictures appears less daunting than one composed of abstract symbols. Finally, they make diagrams more visually appealing: people prefer real objects to abstract shapes. (4.3.1 of Daniel Moody - The "Physics" of Notations)

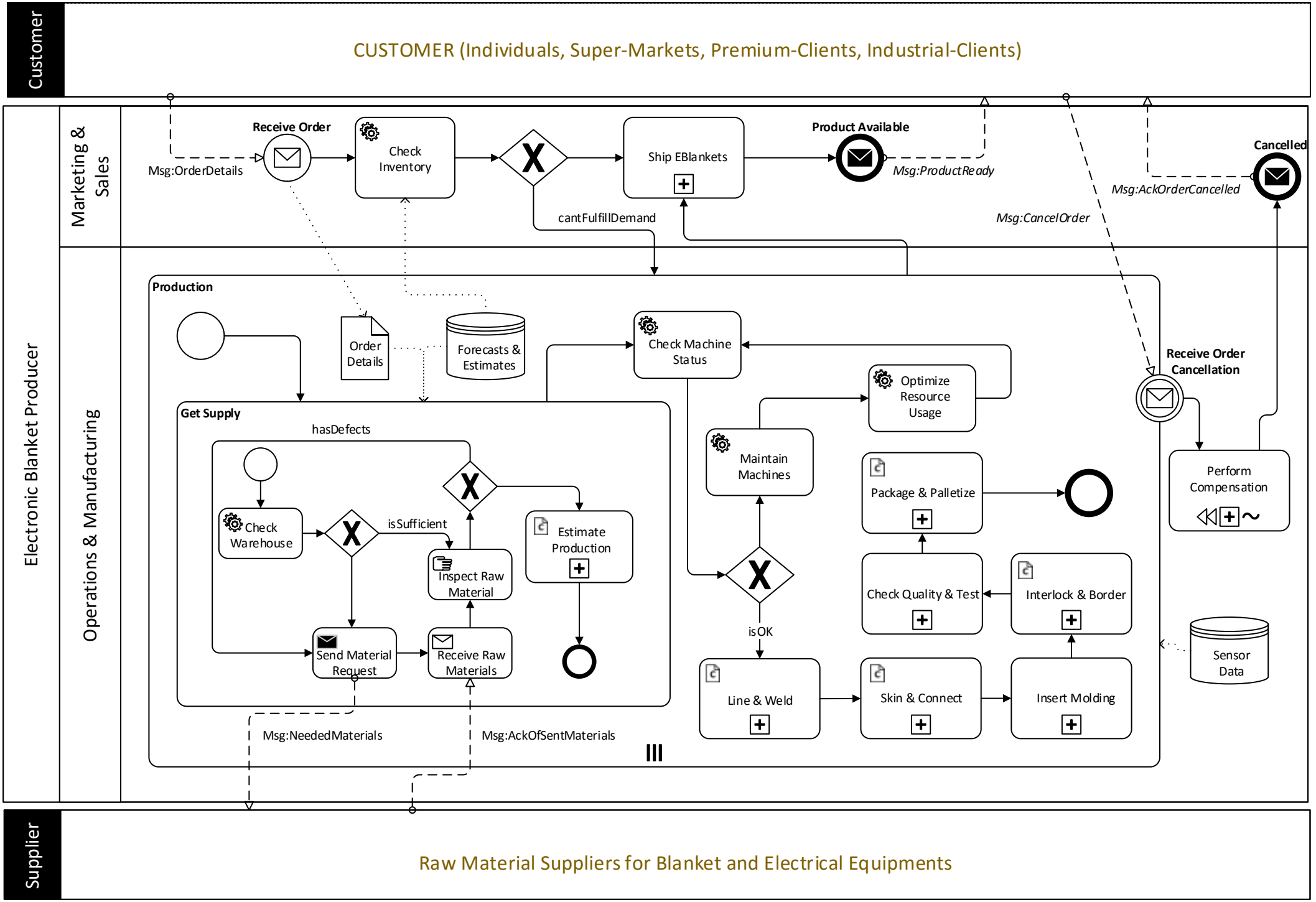
Most SE notations use only a single visual variable to encode information: shape (see Fig. 28). Such notations are visually one-dimensional: they use only one of the eight available visual communication channels, and ironically, the one with the lowest bandwidth. Shape is one of the least powerful visual variables as it can only be used to encode nominal data and is one of the least cognitively efficient. (4.6 of Daniel Moody - The "Physics" of Notations)

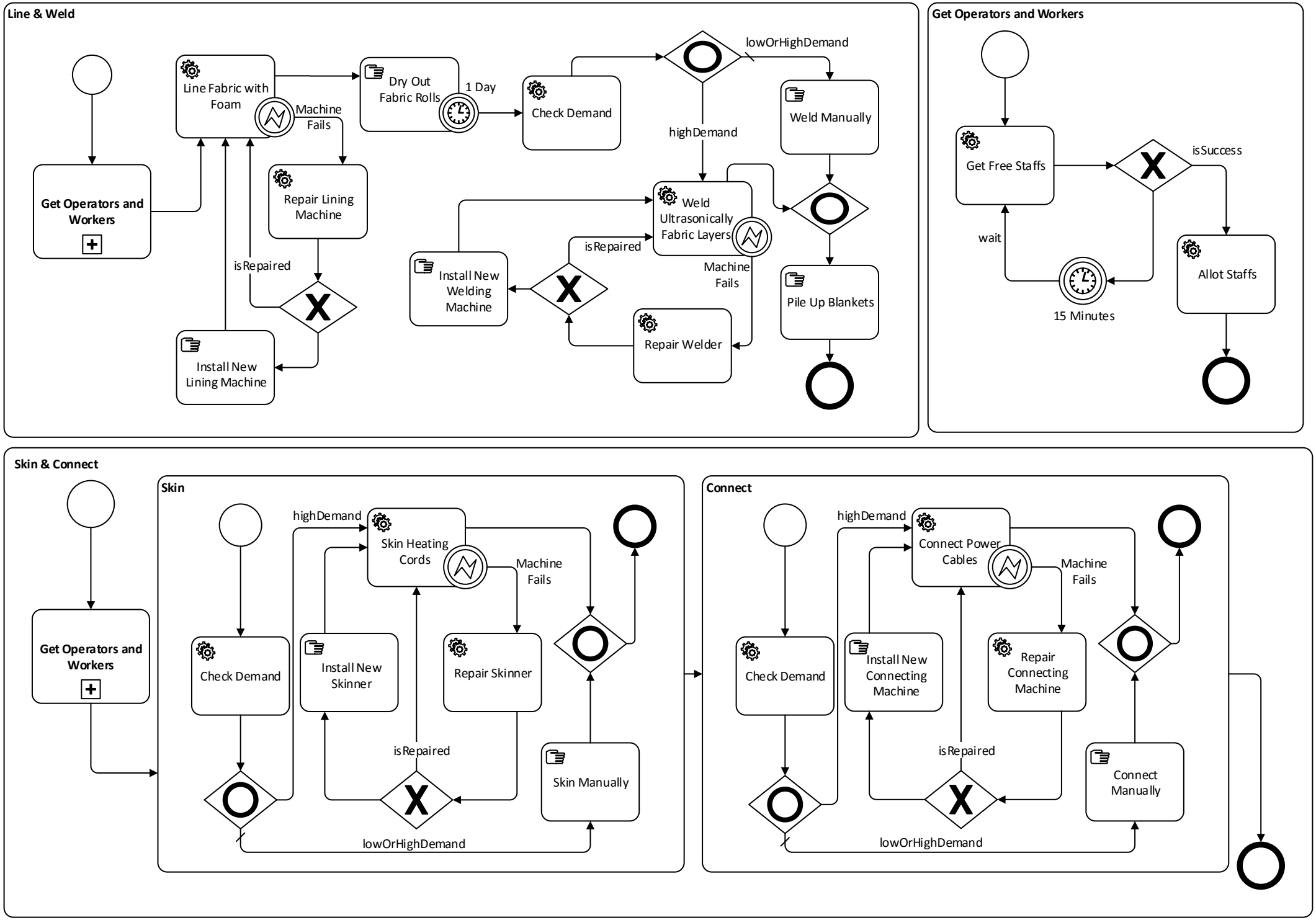
Hybrid (Graphics+Text) Symbols: *Textual encoding can be used to reinforce and expand the meaning of graphical symbols. This combines the semantic expressiveness of the UML convention with the visual expressiveness of the Oracle convention, while also taking advantage of dual coding. (4.7.2 of Daniel Moody - The "Physics" of Notations)*

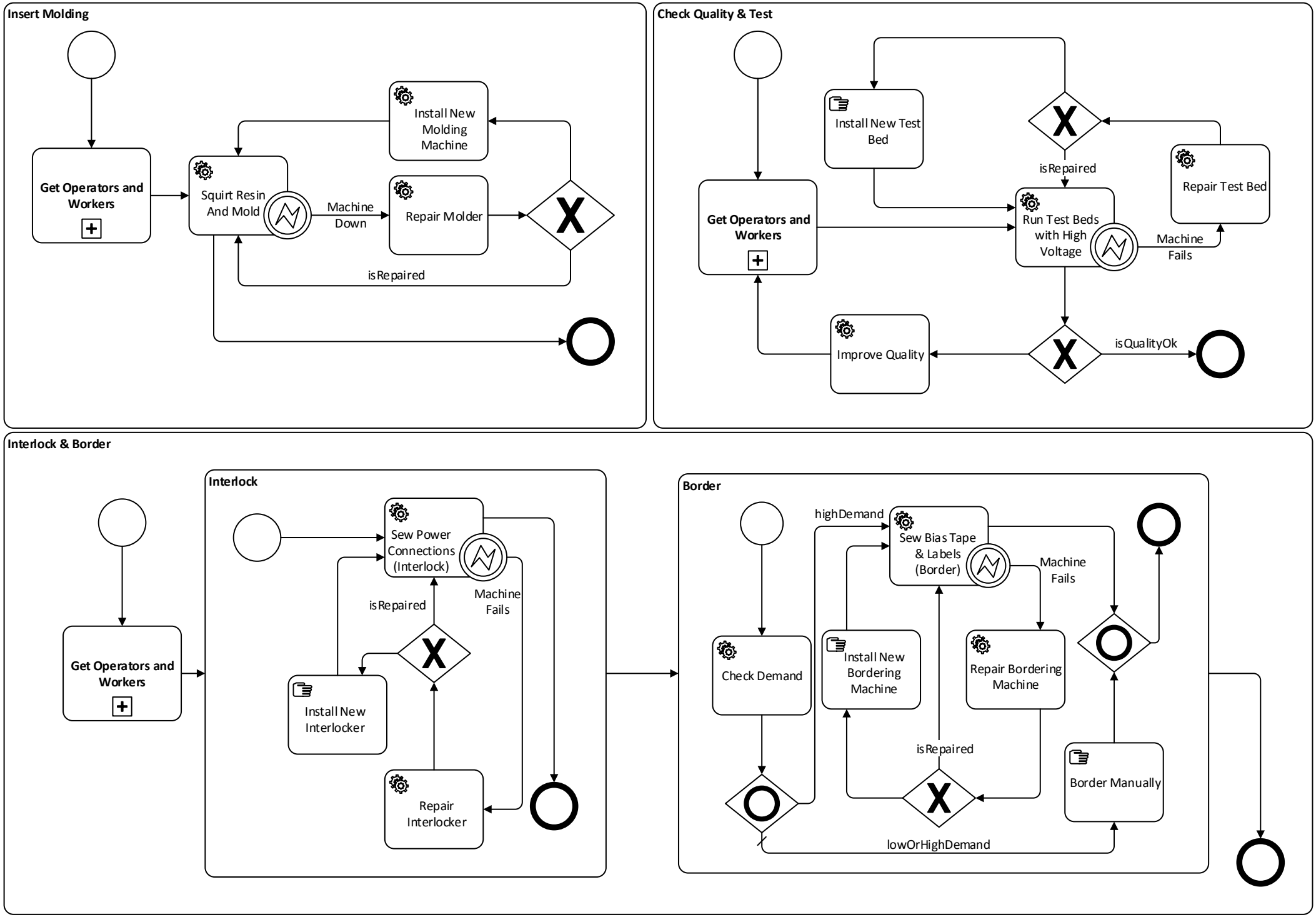
As we are already familiar with the Data Object icon and Context depicts various kinds of Data Objects, it's icon with a "C" in it can depict "Context" to the reader or designer or developer. It makes the CES icon one Hybrid Symbol which has a greater bandwidth (appeal).

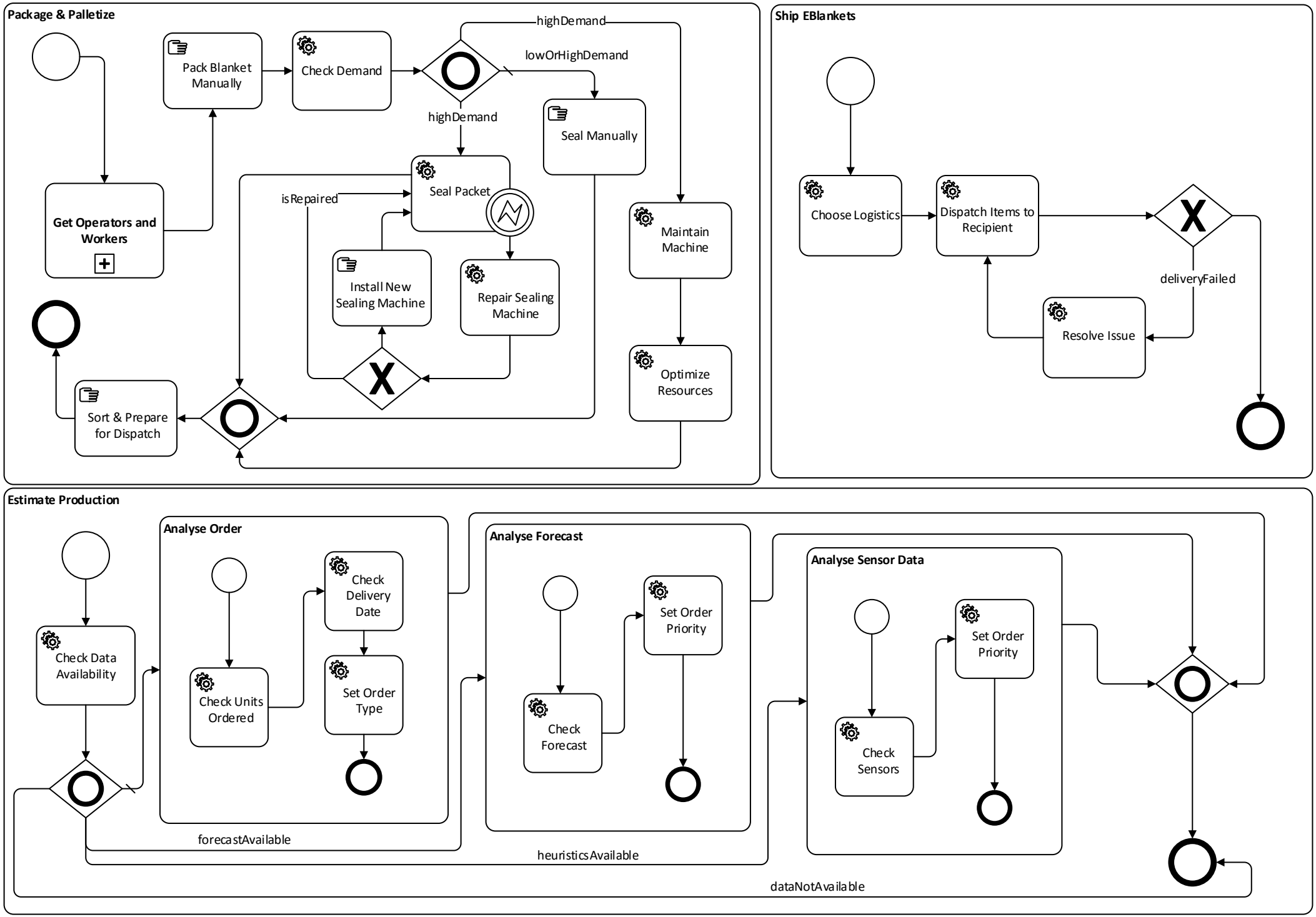


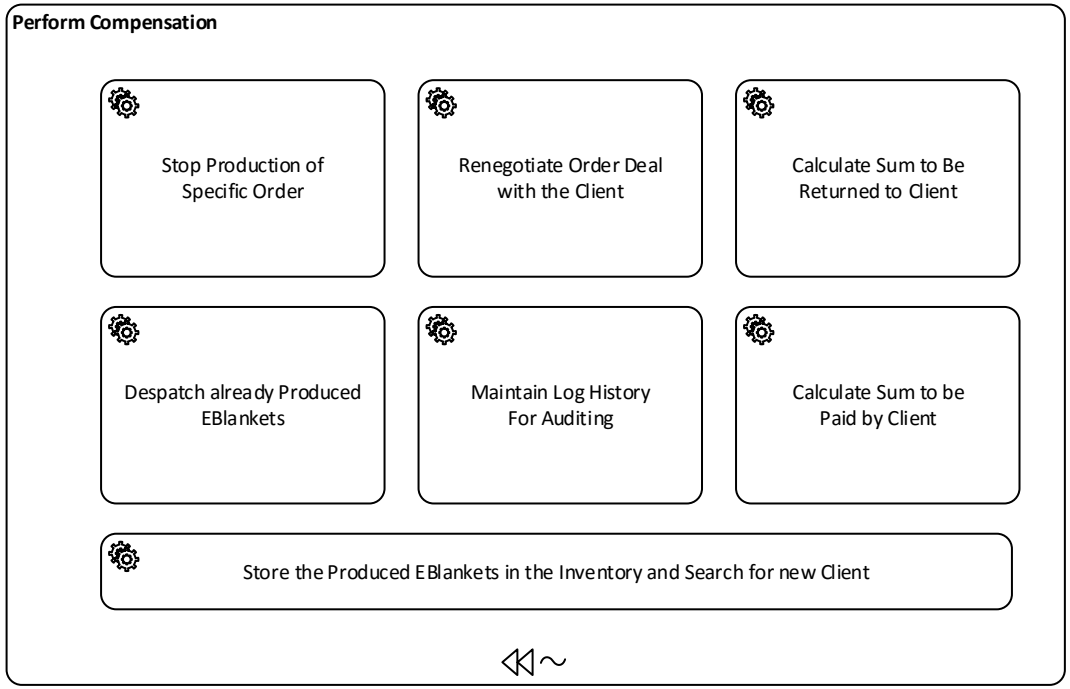
Collapsed Sub-Process (CES)

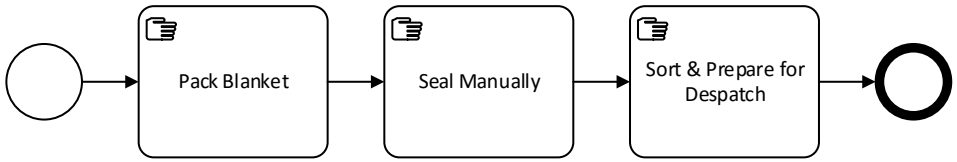

Customer
CUSTOMER (Individuals, Super-Markets, Premium-Clients, Industrial-Clients)
Electronic Blanket Producer
Marketing & Sales
Operations & Manufacturing
Receive Order
Msg:OrderDetails
Check Inventory
Ship EBlankets
Product Available
Msg:ProductReady
Cancelled
Msg:AckOrderCancelled
cantFulfillDemand
Msg:CancelOrder
Production
Order Details
Forecasts & Estimates
Check Machine Status
Optimize Resource Usage
Receive Order Cancellation
Get Supply
hasDefects
Maintain Machines
Package & Palletize
Perform Compensation
Check Warehouse
isSufficient
Estimate Production
Inspect Raw Material
Check Quality & Test
Interlock & Border
Send Material Request
Receive Raw Materials
isOK
Sensor Data
Line & Weld
Skin & Connect
Insert Molding
Msg:NeededMaterials
Msg:AckOfSentMaterials
Supplier
Raw Material Suppliers for Blanket and Electrical Equipments


Line & Weld
Get Operators and Workers
Line Fabric with Foam
Machine Fails
Repair Lining Machine
isRepaired
Install New Lining Machine
Dry Out Fabric Rolls
1 Day
Check Demand
lowOrHighDemand
highDemand
Weld Manually
Weld Ultrasonically Fabric Layers
isRepaired
Machine Fails
Install New Welding Machine
Repair Welder
Pile Up Blankets
Get Operators and Workers
Get Free Staffs
isSuccess
wait
15 Minutes
Allot Staffs
Skin & Connect
Get Operators and Workers
Skin
highDemand
Skin Heating Cords
Machine Fails
Check Demand
Install New Skinner
Repair Skinner
isRepaired
Skin Manually
lowOrHighDemand
Connect
highDemand
Connect Power Cables
Machine Fails
Check Demand
Install New Connecting Machine
Repair Connecting Machine
isRepaired
Connect Manually
lowOrHighDemand

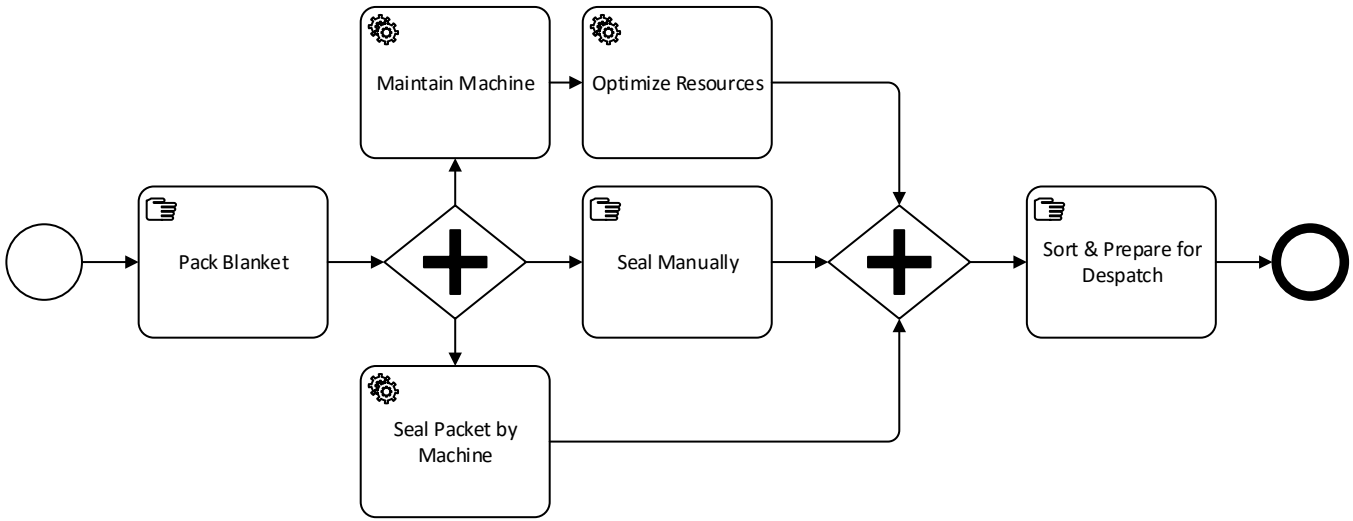

Insert Molding
Get Operators and Workers
Squirt Resin And Mold
Machine Down
Repair Molder
Install New Molding Machine
isRepaired
Check Quality & Test
Get Operators and Workers
Install New Test Bed
Run Test Beds with High Voltage
isRepaired
Machine Fails
Repair Test Bed
Improve Quality
isQualityOk
Interlock & Border
Interlock
Get Operators and Workers
Sew Power Connections (Interlock)
isRepaired
Machine Fails
Install New Interlocker
Repair Interlocker
Border
highDemand
Check Demand
Sew Bias Tape & Labels (Border)
Machine Fails
Install New Bordering Machine
Repair Bordering Machine
isRepaired
Border Manually
lowOrHighDemand


Package & Palletize
Pack Blanket Manually
Check Demand
highDemand
lowOrHighDemand
highDemand
Seal Manually
Seal Packet
isRepaired
Get Operators and Workers
Install New Sealing Machine
Repair Sealing Machine
Maintain Machine
Optimize Resources
Sort & Prepare for Dispatch
Ship EBlankets
Choose Logistics
Dispatch Items to Recipient
deliveryFailed
Resolve Issue
Estimate Production
Analyse Order
Check Data Availability
Check Units Ordered
Check Delivery Date
Set Order Type
forecastAvailable
Analyse Forecast
Check Forecast
Set Order Priority
heuristicsAvailable
Analyse Sensor Data
Check Sensors
Set Order Priority
dataNotAvailable

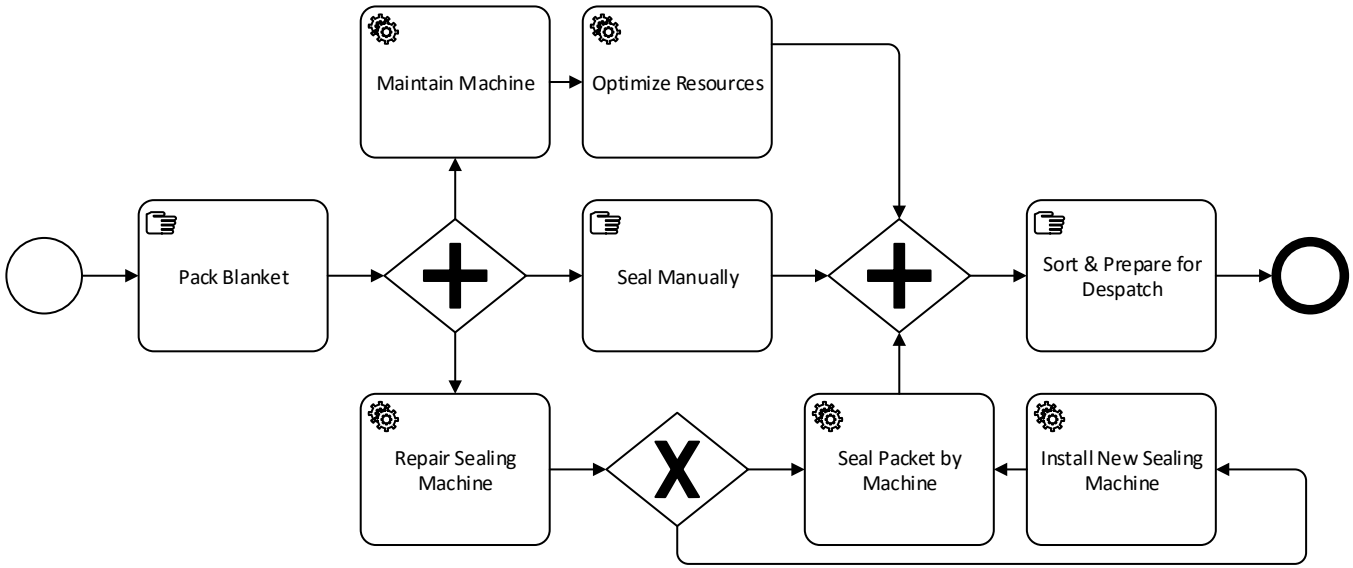

Perform Compensation
Stop Production of Specific Order
Renegotiate Order Deal with the Client
Calculate Sum to Be Returned to Client
Despatch already Produced EBlankets
Maintain Log History For Auditing
Calculate Sum to be Paid by Client
Store the Produced EBlankets in the Inventory and Search for new Client



Context Definition:
#availableWorkers <= 10 & #unitsOrdered >= 1000 &
%Sensors, status != 'Halted'|'Stopped'|'Malfunctioned'
Realization Strategy: Manual Workflow
Intention (Goal): sealAndSortPackets
Sub-Intention: High Utilization of HR
Optimization Strategy: If demand is extremely low, employ less human power at work.
Weight: *0.30*



Context Definition:
#availableWorkers <= 10 & #unitsOrdered >= 1000 &
%Sensors,status != 'Halted' | 'Stopped' | 'Malfunctioned'
Realization Strategy: Automated Workflow
Intention (Goal): sealAndSortPackets
Sub-Intention: High Utilization of HR and High-Throughput
Weight: *0.55*



Context Definition:
#availableWorkers <= 10 & #unitsOrdered >= 1000 &
%Sensors,status = 'Halted' | 'Stopped' | 'Malfunctioned'
Realization Strategy: Semi-Automated Workflow (Repairing)
Intention (Goal): sealAndSortPackets
Sub-Intention: High Utilization of HR and High-Throughput
Weight: *0.15*