General Metal Fabrication and Assembly







Development

Sub Sector: **Metal Engineering Production Management**

Title General Metal Fabrication and Assembly

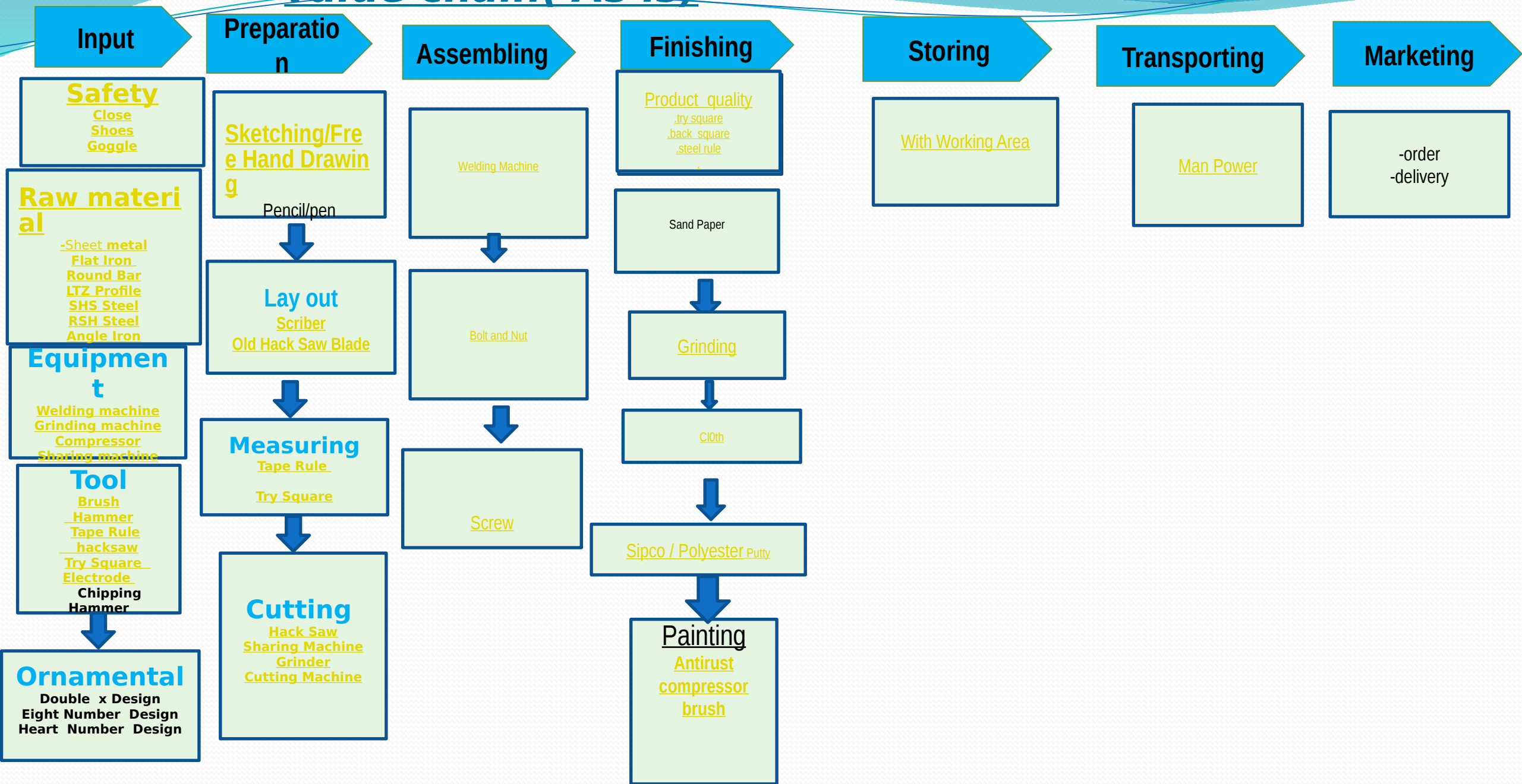
OBJECTIVE

- Generally, the study was conducted to determine the present enterprise practices in general metal fabrication & assembly in Alem ketema District, Amhara region.

  Specifically, this aims to:

  - Discuss the present enterprise in general metal fabrication & assembly both for micro and macro enterprise.
  - Identify the Value Chain (AS IS) in Alem ketema general metal fabrication & assembly.
  - Compare the Value Chain (AS IS) to that of the benchmark.
  - Identify the gaps and constraints in attaining high quality product.
  - Identify and recommend technologies that will improve enterprise practice & increase the quality of product.

General Metal Fabrication And Assembling value chain(As is)



General metal fabrication &assembly Value Chain (To Be)

Input

Safety
-safety cloth
-safety shoes
Safety helmet_

Raw material
-stainless steel
-mild steel &
galvanized steel
-fasteners

Equipment
-milling machine
-drill press
-surface grinder
-tool making
-welding machine
Welding soaker

Tools
Bevel protractor
Steel rule
Tap rule
Scriber
Wire brush
Back square
try square

Ornamental work

preparation

_sketch
-auto CAD

Lay out
-Scriber
-

Measurement
-tape rule
-steel rule

Cutting
Hack Saw
Sharing Machine
Grinder
Cutting Machine
CNC cutter machine

Sheet metal process
Forming &rolling
Cutting &punching

Assembly

_welding process
-MMAW
-GTAW
-GMAW
Plasma arc welding

Oxy acetylene

Spot welding

Fastener
-bolt nut
-screw

Finishing

Product quality
Bevel protractor

grinding

Sanding

polishing

painting
-compressor
-polyester putty

storing

Storing house

transporting

cars

plane

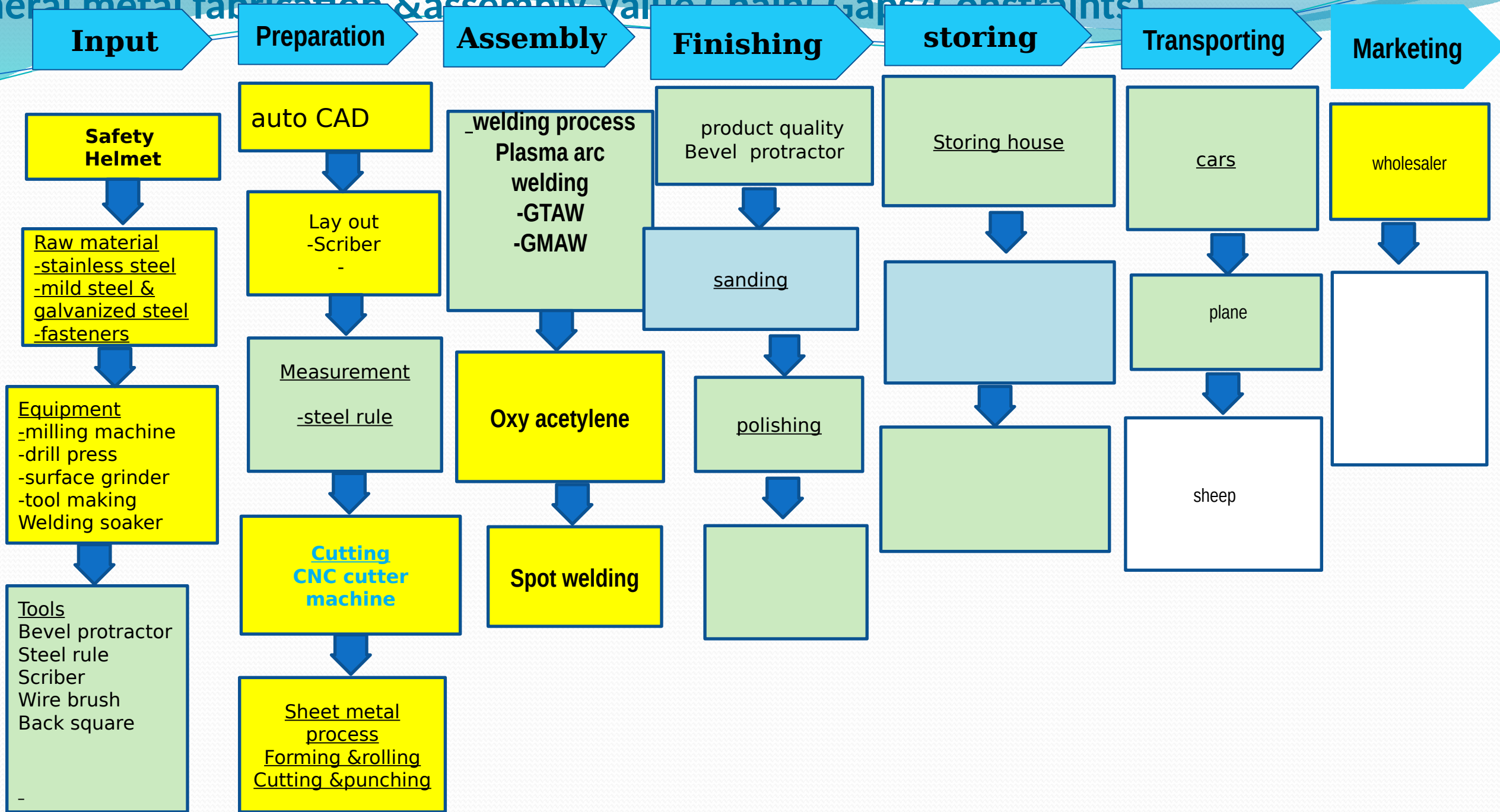
sheep

marketing

Retailer

wholesaler

neral metal fabrication &assembly Value Chain(Gaps /Constraints)



TECHNOWARE		HUMANWARE	INFOWARE	ORGAWARE
.equipment	-Jig & fixtures	Units of Competencies on: • Welding using basic SMAW process	• Welding Manual	• TVET collage
-product quality	-Bevel protractor -Steel rule -Surface grinder	.apply quality standard .perform bench work	• Quality standard Manual • Bench work Manual	.TVET collage .NGO
.sheet metal process	.cutting & punching .forming & rolling	• .cutting & joining sheet metal	• Sheet metal Manual	.TVET collage
	.shearing		.sheet metal manual	• TVET collage
Raw Material preparation	-SHS -RHS -sheet metal -angle iron -plate -galvanized sheet metal	• Perform bench work • Perform sheet metal	• Bench work Manual • Sheet metal manual	.TVET collage
Machining	-milling machine -drill press -tool making -surface grinder	• Using basic machine operation • Perform bench work	• Milling machine Manual • Bench work Manual	.machine company .TVET collage
Cutting	-cut of machine	.perform bench work	• Bench work manual	• TVET collage
Assembling equipment	-GTAW -GMAW -Drill press -Spot welding	• Perform GTAW &GMAW • Perform resistance welding • Perform bench work	.GTAW& GMAW Manual .Resistance welding manual .bench work manual	.TVET collage .manufacturing company
Finishing	-surface grinder	• Perform bench work	• Bench work manual	.TVET collage
TRANSPORTING	-cars,plane,sheep	.		
Marketing	-wholeseler	• Entrepreneur	• Business Manual	.company

OTHER TECHNOLOGIES

- TECHNOLOGIES







THANK YOU VERY MUCH