

# SUXEE DFA document

Suxee Consulting Oy

28.1.2014

# DFA document

- FA process description
- Assembly phase/part analysis
- Assembly time and part count estimate
- Risk identification
- Build feedback and follow up
- Preliminary Manufacturing Instructions

# Front page

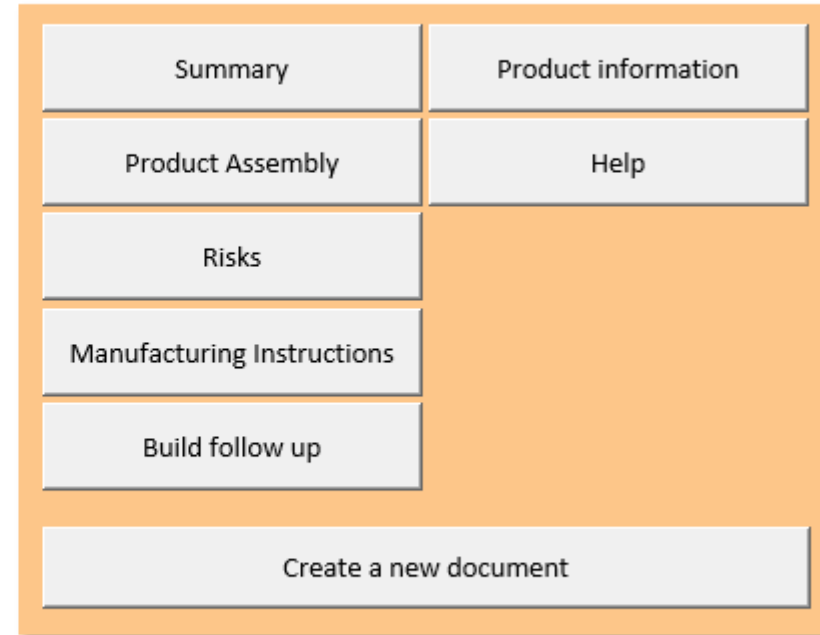
copyright SUXEE Consulting Oy 2013



## DFA Document

Estimation of hand time and part count  
Assembly process risk handling  
Manufacturing Instructions  
Prototype manufacturing follow up

<b>Product:</b>	Mobile phone
<b>Originator:</b>	Sauli
<b>Approver:</b>	N.N
<b>Document ID:</b>	123456677889
<b>Version:</b>	01
<b>Location:</b>	Documents.../templates/design/Xu Bo
<b>Date:</b>	10.1.2013
<b>File name:</b>	DFM_Analyysi_Mobile Phone1_versio_01
<b>License expiry date:</b>	1.2.2014



A navigation menu with a light orange background and a dark orange border. It contains several buttons arranged in a grid-like fashion. The buttons are: Summary, Product information, Product Assembly, Help, Risks, Manufacturing Instructions, Build follow up, and a larger button at the bottom labeled 'Create a new document'.

# Product assembly process

copyright SUXEE Consulting Oy 2013

## DFA Analyze

Originator: Sauli  
 Date: 10.1.2013  
 Product: Mobile phone  
 Product: 123456677889

Front page	
Add module / subassembly	Update hand time and part count
Add operation / part	Delete operation / part
Create a separate sheet from selected operation or part	Start a new analyze

OBS! If a separate sheet has been created, the hand time and part count estimations are done there.

### Summary of estimates

			Hand time	Comment	Part count	Comment
<b>Product assembly total:</b>			1,82		16	
Moduuli	1	Basic phone	0,90		9	
Alihankinta kkp	1	front cover	0,30		3	
Alihankinta kkp	2	Back cover	0,40		4	
Loppu kkp	1	Final Assembly and packing	0,22		0	
	1.1	Basic phone	0,16		0	
	1.2	Battery	0,06		0	
	1.3	Front cover assy	0,00		0	
	1.4	Back cover	0,00		0	

# Assembly phase/part analysis

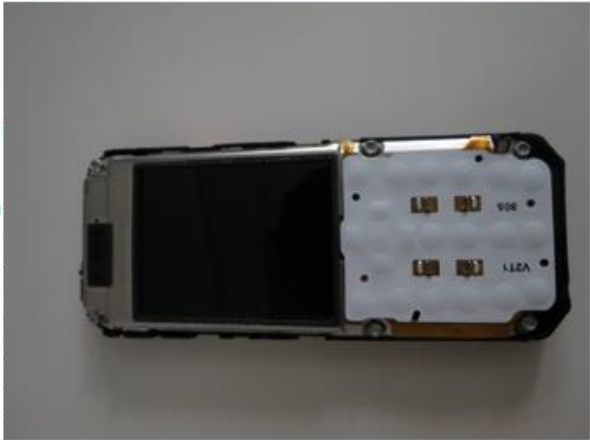
**DFA Analyze**

Originator: Sauli  
 Date: 10.1.2013  
 Product: Mobile phone  
 Document ID: 123456677889

Front page    Delete this sheet

Hand Time	Part count
0,16	0

Lisää kuva

Assembly Phase	Final Assembly and packing:Basic phone	
Description Assembly Phase	Basic phone is put into a fixture	
Comments for Risks		
DFA Analyze Comments		
Part Packing and Feeding		
ESD Sensitivity	No	
Part positioning	Jig positioning	
Joining Method	no	
Assembly Direction	top down	
Gripper / tool	no	
Jig / Fixture	yes	
Designer	Pekka	

Risk Description	Risk Prevention	Control Method	Comments	Responsible	Status	Updated	Severity	Occurrence	Detection	Risk Level
Dipslay may get dusty	With gloves	Visual check	Comment	xx	Not Ready	10.1.2014	High	High	Medium	

# Assembly Risk identification



copyright SUXEE Consulting Oy 2013

## DFA Analyze

Originator: Sauli  
 Date: 10.1.2013  
 Product: Mobile phone  
 Document ID: 123456677889

Front Page	Sort acc. to status
Update risk list	Sort acc. to status and colour

No	Assembly Phase	Risk descriptio	Risk prevention	Process control method	Comment	Responsible	Status	Updated	Severity	Occurrence	Detection	Risk level
1	Final Assembly and packing:Basic phone	Dipslay may get dusty	With gloves	Visual check	Comment	xx	Kesken	10.1.2014	Korkea	Korkea	Keski	High
2	Final Assembly and packing:Battery	Security label may rip off	check	visual	no	supervisor	Kesken	10.1.2014	Matala	Keski	Keski	Low

# Build feedback and follow up



copyright SUXEE Consulting Oy 2013

## DFA Analyze

Originator: Sauli  
 Date: 10.1.2013  
 Product: Mobile phone  
 Document ID: 123456677889

Front Page	Sort acc. to status
Update risk list	Sort acc. to status and colour

No	Assembly Phase	Risk descriptio	Risk prevention	Process control method	Comment	Responsible	Status	Updated	Severity	Occurrence	Detection	Risk level
1	Final Assembly and packing:Basic phone	Dipslay may get dusty	With gloves	Visual check	Comment	xx	Kesken	10.1.2014	Korkea	Korkea	Keski	Red
2	Final Assembly and packing:Battery	Security label may rip off	check	visual	no	supervisor	Kesken	10.1.2014	Matala	Keski	Keski	Green

copyright SUXEE Consulting Oy 2013

## Proto Builds

Originator:  
 Date:  
 Product:  
 Document ID:

Front Page	Update build history data
Update build data	Clear build history data

Build: 1

Builds				
	Estimated time	Build time	Difference	Comment
<b>Product Assembly:</b>	1,82			
Moduuli Basic phone	0,90	1,20	0,30	
Alihankinta kkp front cover	0,30	0,40	0,10	
Alihankinta kkp Back cover	0,40	0,34	-0,06	
Loppu kkp Final Assembly and packing	0,22	0,33	0,11	

Build history				
	Estimate	Build 1	Build 2	Bu
<b>total</b>	1,82	2,27	0,00	
Moduuli Basic phone	0,90	1,20		
Alihankinta kkp front cover	0,30	0,40		
Alihankinta kkp Back cover	0,40	0,34		
Loppu kkp Final Assembly and pack	0,22	0,33		

# Summary in-house/subassembly



**DFA Analyze summary**

Originator: Sauli  
Date: 10.1.2013  
Product: Mobile phone  
Product: 123456677889

Front page

Update summary of estimates

Update DFA data

Summary of estimates			
Assembly	Hand time	Part count	Assy index
Total	1,82	16	0,11
Moduuli Basic phone	0,9	9	0,10
Alihankinta kkp front cover	0,3	3	0,10
Alihankinta kkp Back cover	0,4	4	0,10
Loppu kkp Final Assembly and packing	0,22	0	0,00



# Manufacturing instructions

copyright SUXEE Consulting Oy 2013

## Manufacturing Instructions

Originator: Sauli  
Date: 10.1.2013  
Product: Mobile phone  
Document ID: 123456677889

Front Page	
Create mfg instructions per assembly phase	Create mfg instructions per assembly phase (new file)
Create mfg instructions per module	Create mfg instructions per module (new file)

### 1 Final Assembly and packing:Basic phone

Basic phone is put into a fixture



### 2 Final Assembly and packing:Battery

Battery assembly



### 3 Final Assembly and packing:Front cover assy

Assy of front cover