Factory Productivity improvement through Time & Operation Standardization

TMIS
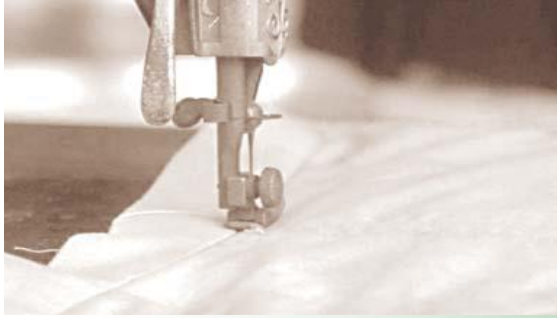### (TIME MANAGEMENT INTEGRATED SOLUTION)

An Introduction of

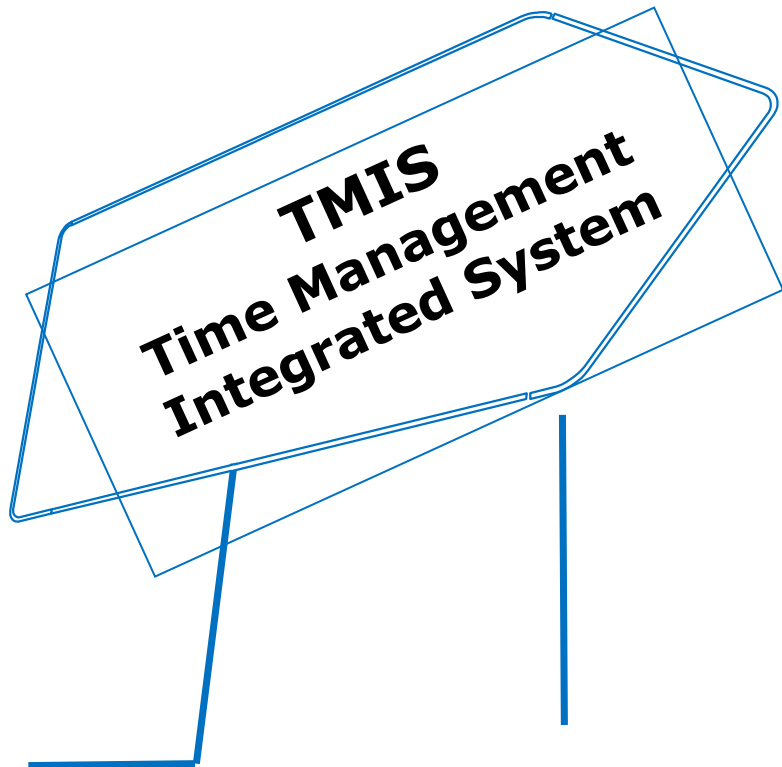# The Company

&

The Product

TMIS

TMIS Time Management Integrated System

TMIS (International) Ltd

Standardization Creates Values

Company

Business Information

- Business Name: **TMIS (International) Ltd**
- Business Address: Unit 603, 6/F Chow Sang Sang Building,
                      229 Nathan Road, Kowloon, Hong Kong
- Email: info@tmisintl.com
- Tel: 852-90177818

General Business Activities

TMIS (International) LTD has been established as Soft-goods Application Software & Valued Added Consultancy Provider in Hong Kong.

TMIS as a Product

The core product **TMIS**
(**Time Management Integrated System**) is system of productivity improvement tools tailored for fashion manufacturing industry.

TMIS as a Company also act as a

ONE STOP SOLUTION PROVIDER
For seamless service, which among other act as referral Agent for:

PRODUCTION PLANNING Tool for integrated Supply-chain & schedule tracking

iDUMMY automated Mannequin for Size fitting & flexible Pattern Engineering

RFID based Data Capture System for Workstation & Operators Control

AUTO-MOVER System for Production Assembly & Piece-flow System

People

Director

Mr Chaucer Chang

- 28 years experience in Apparel Merchandising.
- Specialist & Subject Matter Experts in Brand Supply Chain Management.
- Proficient in System Integration of Standard Time Application, Production Planning Tool & Data Capture System.
- A Graduate of HKPU Institute of Textile & Clothing, Hong Kong

Principal consultant

Zainuddin HM Yasin

- A well honed Manufacturing, R&D n IE Specialist, focusing in the Apparel n Toy Industry.

- -38 years experience in the Apparel & Toy Mfg Industry, among others at Wing Tai Group HK, Crystal Group HK, & Mattel Incl. USA.

- -Alumni of NUS Business School, Singapore, & Graduate of HKPU Institute of Textile & Clothing, HK.

- -A Certified Lean Manager of HKPC, HK.

Resultant specialist

T.K. Louie

- General Manager, Superl Holding Ltd, : 2012 – 2017
- Summer Technology Ltd: 2010 - 2012
- General Manager, Crystal Apparel(Zhong Shan Yida Apparel) 2007 – 2008
- Deputy Vice President of IT, Li & Fung Trading: 2005 – 2007
- GM, China & Director of Asia Supply Chain, GERBER: 1997 – 2005
- Director & Deputy General Manager, National Garment Pte Ltd: 1991-1997

Consultant Advisor

Dr Allan Chan

- Dr Chan is a retired professor from the highly-rated Hong Kong Polytechnic University's Institute of Textiles & Clothing

- His expertise is in garment manufacture and engineering, pattern design and apparel fitting

- His research work has culminated into his award-winning invention; i.Dummy fitting robots

Principal Trainer

Mr Stanley Hee

- Specialist in Industrial Engineering, Garment Technical & on site Production Training & Support.

- - 28 years experience, among others at Sterling Products (Hong Kong) Ltd, Crystal Group & Clothing Industry Training Authority Hong Kong.

- - A Graduate of HKPU Institute of Textile & Clothing, HK

Services

The valued added service covers, but not limited to:

- *Productivity and Efficiency turnaround,*
- *Big Data Mobile application in Apparel Manufacturing*
- *IE Concept & Culture training,*
- *LEAN Management training,*
- *Automation project implementation,*
- *Process Reengineering & Change Management*
- *Product Engineering & Development.*

TMIS

the System

*Ever changing styles, short production runs, on-time delivery and low margins.......*garment manufacturers need to be highly competitive.

TMIS is a tool of
- **Time – Cost benchmarking**
- **Productivity Improvement**
- **based on a scientific and ethical method analysis technique. (Method Time Measurement,MTM-2)**

*Ever changing styles, short production runs, on-time delivery and low margins.......*garment manufacturers need to be highly competitive.

Productivity is improved through
- **detailed analysis of existing methods**
- **objective comparison**
- **implementation of "best method"**

*Ever changing styles, short production runs, on-time delivery and low margins.......*garment manufacturers need to be highly competitive.

TMIS is

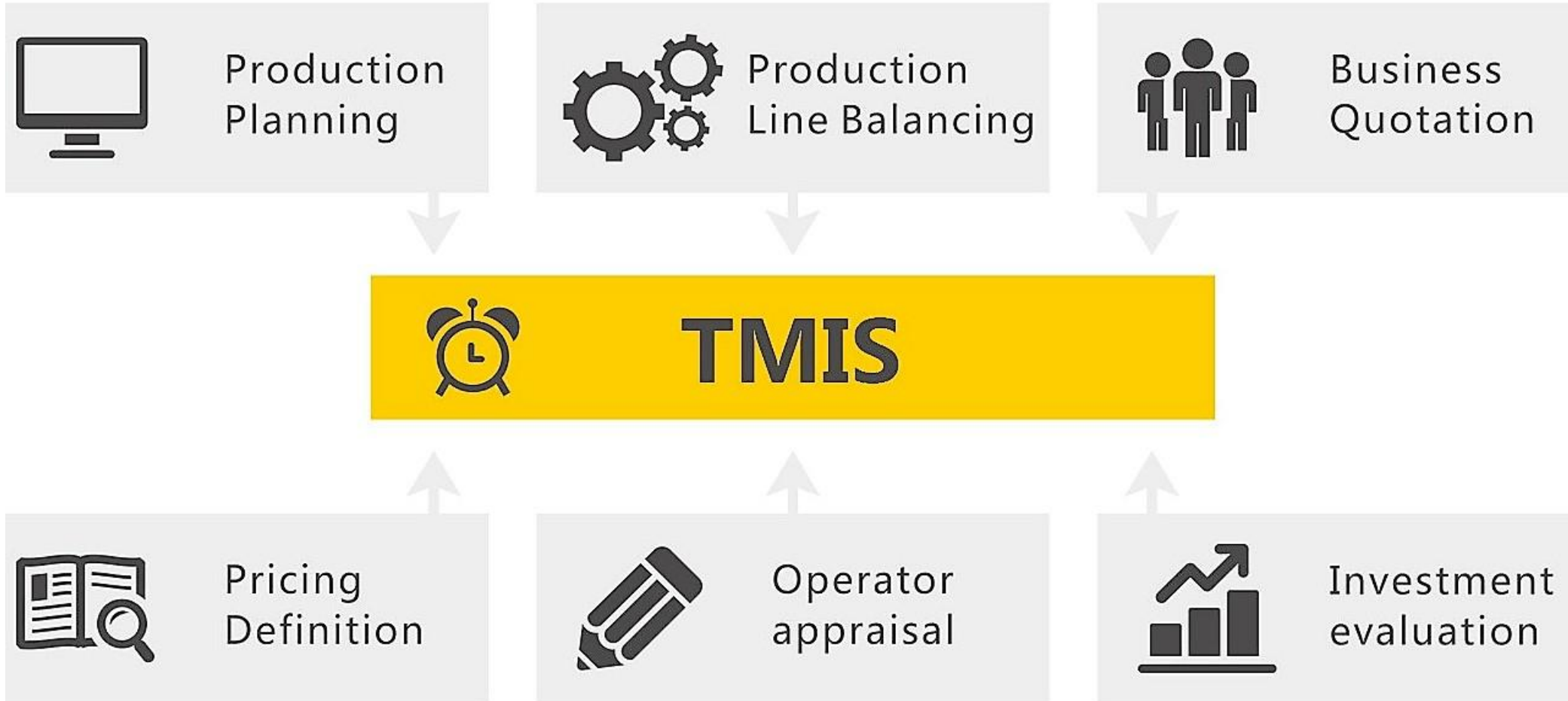# A company-wide philosophy of continuous improvement.

*E*ver changing styles, short production runs, on-time delivery and low margins.......garment manufacturers need to be highly competitive.
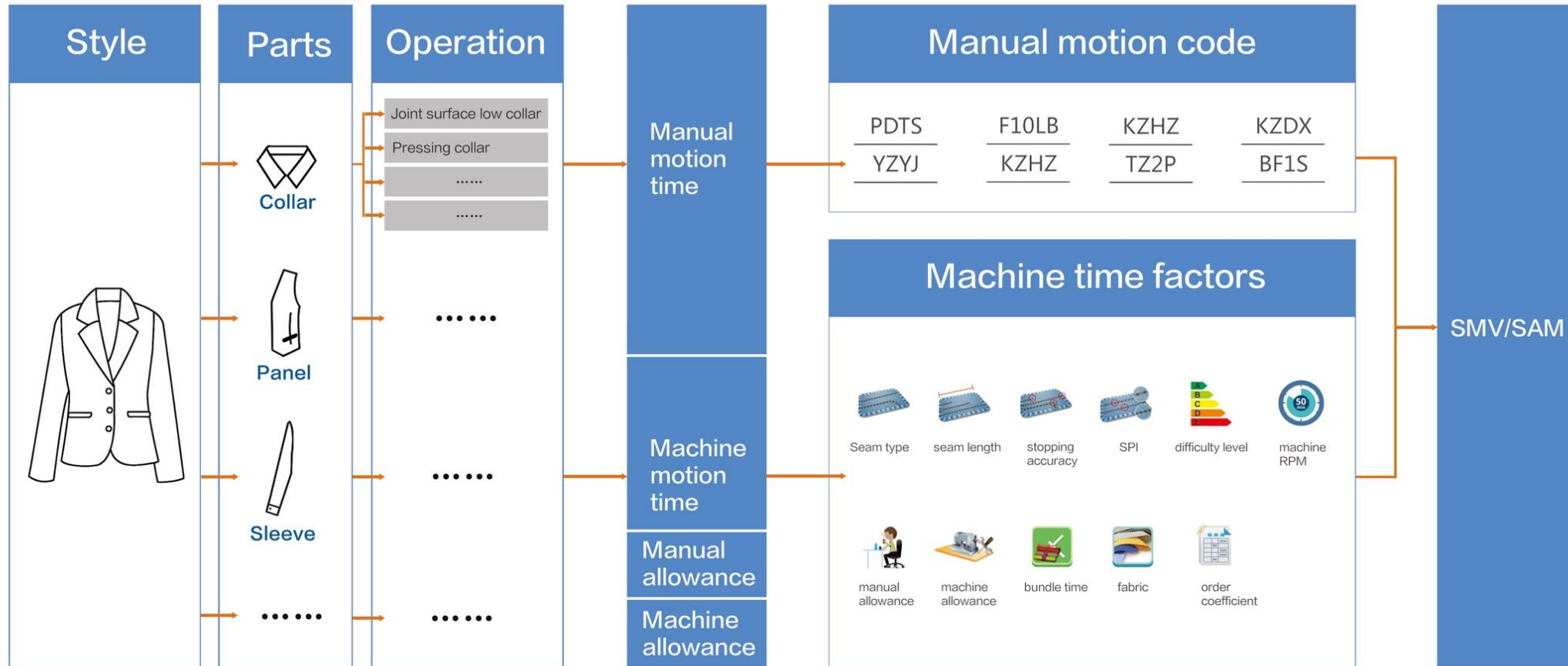
- **Factory efficiencies may be measured against international standards,**
- **precise costings,**
- **effective incentive schemes,**
- **properly balanced production lines**
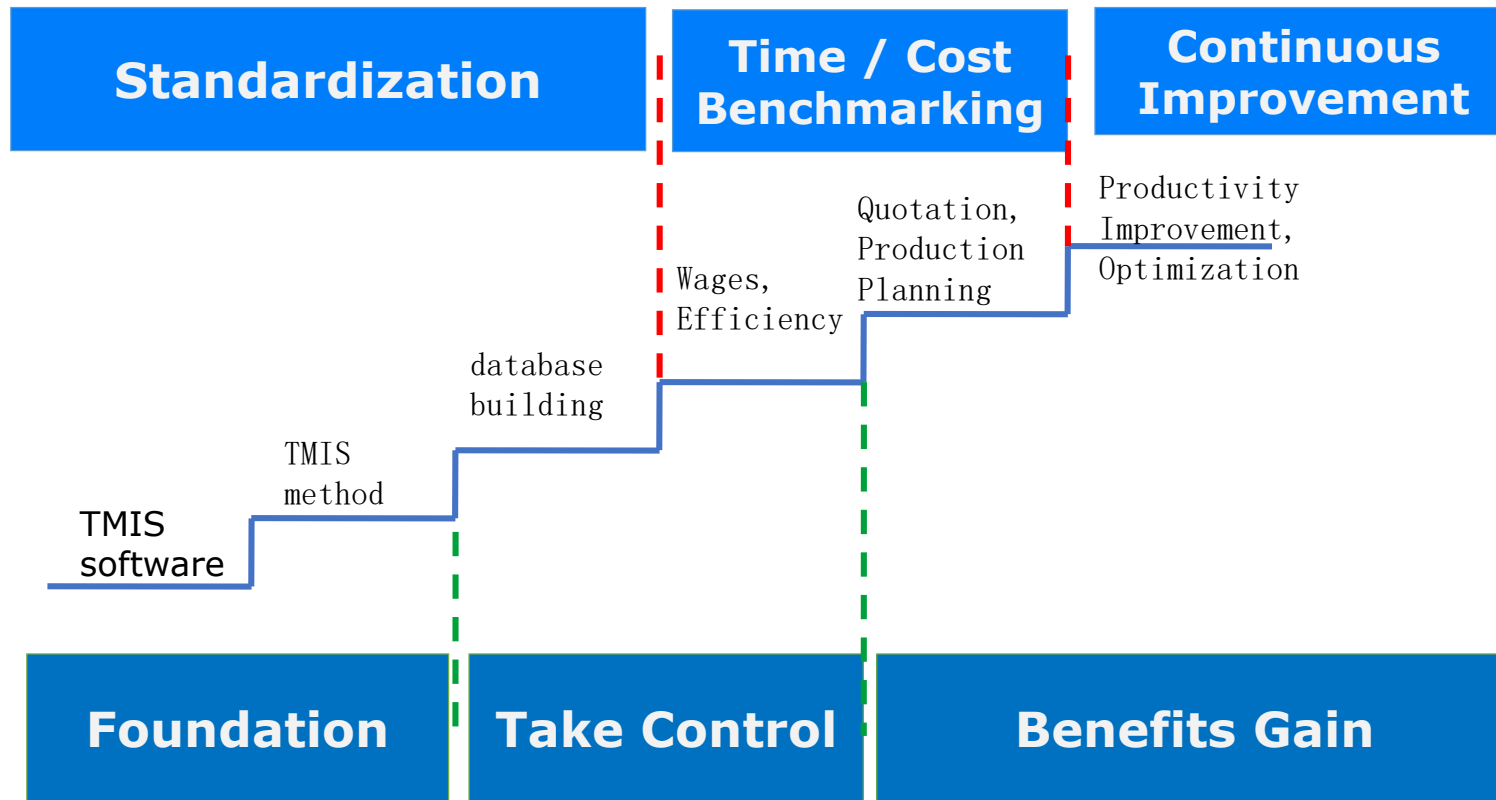- **a more productive workforce are all evident**

TMIS 6 MAIN FUNCTIONS

Production Planning

Production Line Balancing

Business Quotation

TMIS

Pricing Definition

Operator appraisal

Investment evaluation

TIME (SMV) Benchmarking Mechanism

TMIS ladder approach to success

| Standardization | Time / Cost Benchmarking | Continuous Improvement |

Productivity Improvement, Optimization

Quotation, Production Planning

Wages, Efficiency

database building

TMIS method

TMIS software

| Foundation | Take Control | Benefits Gain |

TMIS implementation steps

Prepare the infrastructures   1 Week

Coordinate with the organizations   2 Weeks

TMIS installation & analyst training   4 Weeks

Operation database building   6 Weeks

ROI

- **A minimum 5% cost input improvement upon successful implementation**
- **USD250/month/sewer wages**
- **USD12.5/month/sewer cost improvement**
- **1000 sewers factory**
- **USD 12,500 month**
- **Payback is 1 year**

A good success **Productivity Improvement you** need a 6M

M1 : Material (Delivery & Quality) Team communication method. form. video (**auto gen Process Flow chart? Auto gen S.O.P.? Line balancing tools?)**

M2 : Method (Assembly & handling) **the real database tool? training of PMTS**

M3 : M&E (Machine & Equipment) **Master database?, Machinery requirement plan by style?**
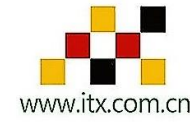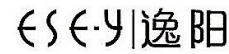
A good success **Productivity Improvement you** need a 6M

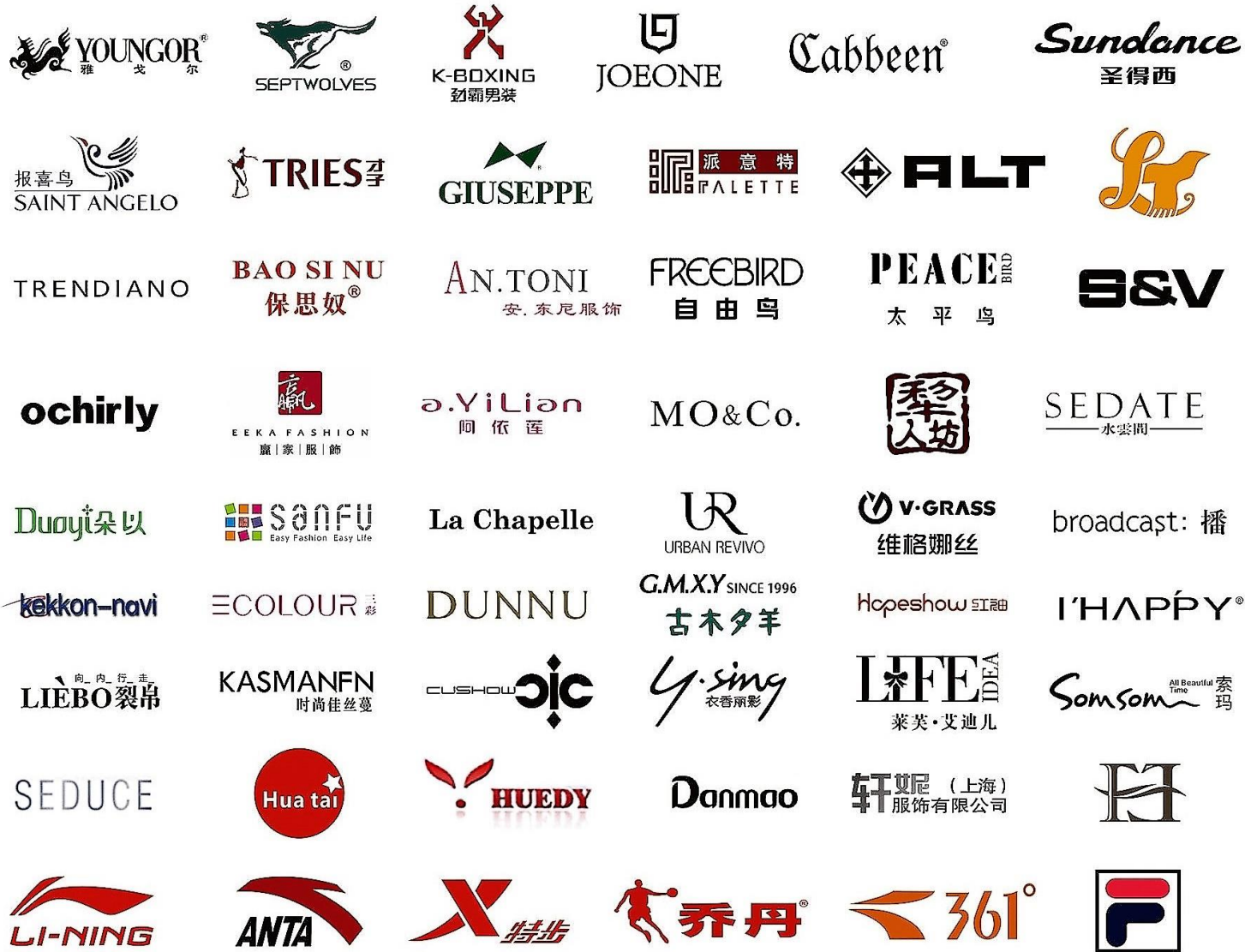M4 : Manpower (skill & efficiency) **Management & Appraisal?**

M5 : Measurement (Standard & actual) **people, process, performance, report, change management, mindset?**

M6 : Management (Plan, control & execution **) Mind set change, alignment, organization transformation ?**

TMIS successful global Customers

TMIS successful global Customers

TMIS

ASSOCIATED PRODUCT

iDummy

i.Dummy

MB-01
Male Bottom Body
Weight:
34.5KG
Dimension:
166X80X72cm

MT-01
Male Top Body
Weight:
25.5KG
Dimension:
170X68X58cm

MF-01
Male Full Body
Weight:
42KG
Dimension:
210X80X72cm

FF-01
Female Full Body
Weight:
40KG
Dimension:
210X80X72cm

FT-02
Female Top Body
Weight:
24KG
Dimension:
170X68X58cm

FB-01
Female Bottom Body
Weight:
35KG
Dimension:
175X80X72cm

i.Dummy®

Revolutionary Robotic Mannequins

i.Dummy

Sized 3-Dimensionally in one mannequin
I.Dummy can be sized into different sizes, height and body shapes in just few seconds which can replace many sizes and shapes of dummies.

Sustainable
The general average of body sizes will change every year. I.Dummy can updated asap without extra cost.

Easy save and load unlimited sizes
After the custom body size is made, user can simply save the configuration and reload next time. Unlimited on recorded sizes to replace many traditional dummies.

Simple and easy to measure and control
A simple and user-friendly i.Dummy GUI is designed to enable control complicated fitting drive with few measurements.

Standardise the sizes in the whole industry to increase the productivity
Users of i.Dummy can share their unique sizes with others along the supply chain to let the processes from development to the customers efficiently.

Disruptive Technology
Sustainable, Cost Saving & Increase Productivity and Creativity

winswin
Patented   www.idummy.com

Applications — For the Entire Fashion Industry

i.Dummy

Business Managing
Use one i.Dummy for different size range from different brands. Get more business without extra costs.

Product Developing
Make sure all design details perfectly in all Sizes to decrease the amount of Substandard

Designing
Save Different Sizes for Every Unique Haute Couture Design

Manufacturing
Fit and Design Quality checks for any size at anytime

Trading
Use same Standard for Fitting increasing the Efficiency of Communication among Clients and Vendors

Fitting
Revise the Updated Customer's Body Profiles in a Short Time

Online Shopping
Fitting in Customers' Sizes when Shopping Online

Retailing
Presentation and Display in the Perfect Sizes

Educating
Excellent tool for Fashion Students

winswin
www.idummy.com   Patented

ETS Real Time Data Capture and Production Management Series

The statistical method of calculating salary --piecework by individual

> > > > > >

ETS production management system seamlessly combines with the mode of piecework by individual. The wages of piecework by individual calculated as per the QTY of qualified product finished by personal, and integrate with ETS system, which can real time count every person's output, efficiency, wage, and realize the management of cargo tracing, delivery and quality control.

The statistical method of calculating salary --piecework by group

ETS production management system seamlessly combines with the mode of piecework by group.The wages of piecework by group calculated as per the QTY of qualified product finished by group,and integrate with ETS system,which can real time count the group's output,efficiency,and wage.

Cargo Circulation
--Traditional bundle/bundling flow

ETS production management system seamlessly combines with the mode of traditional bundle/bundling flow and each bundle QTY decided by the factory' rule,generally,the qty is 8 to 15 PCS,which is suitable for large quantity order and one off shipment is large

Cargo Circulation
--Small bundling flow

ETS production management system seamlessly combines with the mode of small bundle flow, and each bundle QTY decided by the factory' rule,generally,the qty is 3 to 5 PCS.Small bundle flow can accelerate the speed of cargo circulation, balanced the efficiency between workers to achieve smooth flow and speed up the delivery cycle.

Cargo Circulation
--Single piece flow

ETS production management system seamlessly combines with the mode of UPS singal flow, and each bundle QTY decided by the factory' rule,generally,the qty is 1 PCS,which is suitable for massive order but qty and the style transition is fast and which can speed up the delivery cycle.

ETS Product Automation Series

Sewing automatic hanger system

Sewing automatic hanger system

Improve the production efficiency

- Break through the bottleneck of product from launch to finish.
- Break through the waiting of link up between each working procedure.
- Break through waiting for pressing and packing.
- Break through the lag of checking.
- Reduce hauling, lessen the labor intensity.

Integrated production and management together

- Create a good production environment, give full play to workers' initiative
- Quality issues appear, feedback timely
- Decrease management link, reduce management cost
- Make full use of the workshop venue

● Procedure:

| System Control Station | ➜ | Hanger Operation Station | ➜ | Sewing Operation Station | ➜ | Sample Inspection | ➜ | Control Station |

● Hardware feature:

1. Terminal logic can inspect and control that the cloth hanger whether is available to enter workstation
2. Terminal can inspect that the main track whether is available
3. Different connecting line can easy to inspect and no need of computer's synchronization when they are bridging
4. It can put the clothes hanger on the main track by manual
5. It can continue to run after turn off the computer
6. Anyone workstation can be set as QA\QC workstation
7. Group leader's wireless devices no need to operate near the computer
8. Can connect the cutting, workshop, finishing as a whole system
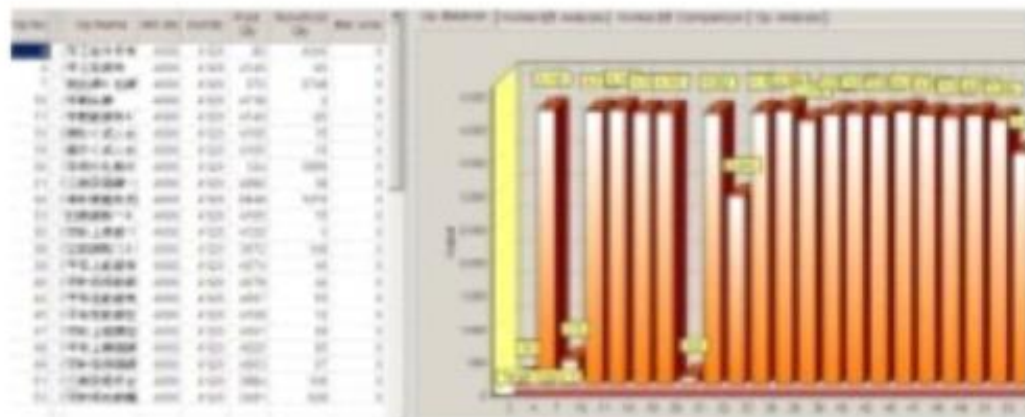9. Workstation adopt touch screen devices can realize a paperless office

Software feature:

1. Forecast the problem, according to the change trend and efficiency of WIP, dynamically adjust WIP
2. Set permissions level queue can dynamically adjust WIP
3. Can operate by manual (swipe tags on the terminal directly, use for manual adjustment)
4. Can dynamically adjust group (not limited to a physical space)
5. Can set a public regional with many skills,share resource
6. Can use ETS do a stable transition on emergency
7. Can deal with flexible subsidy
8. System can be off-standard
9. Can deal with sewing tag management system
10. Support QA\QC on-line
11. System can intelligent distribute the limited half-finished product to worker with high efficiency by the level of efficiency
12. System support to query the clothes hanger's direction of anyone workstation
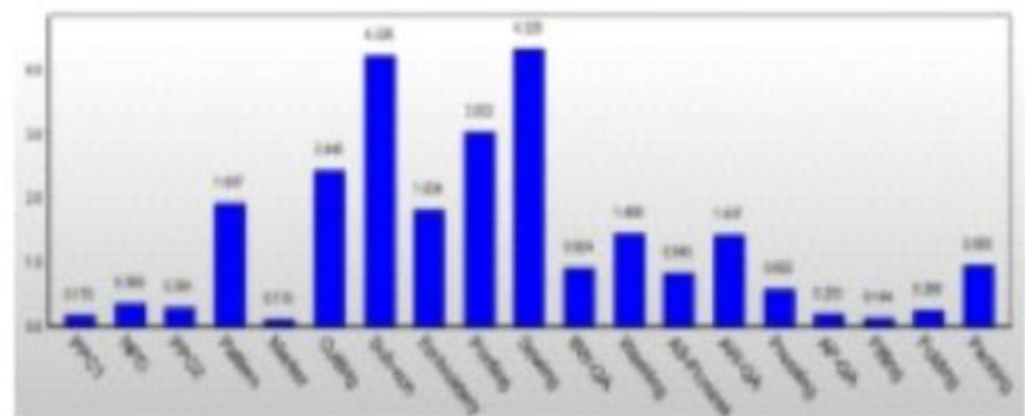13. Can integrate with ETS system, ERP (SAP) and salary system (payroll)

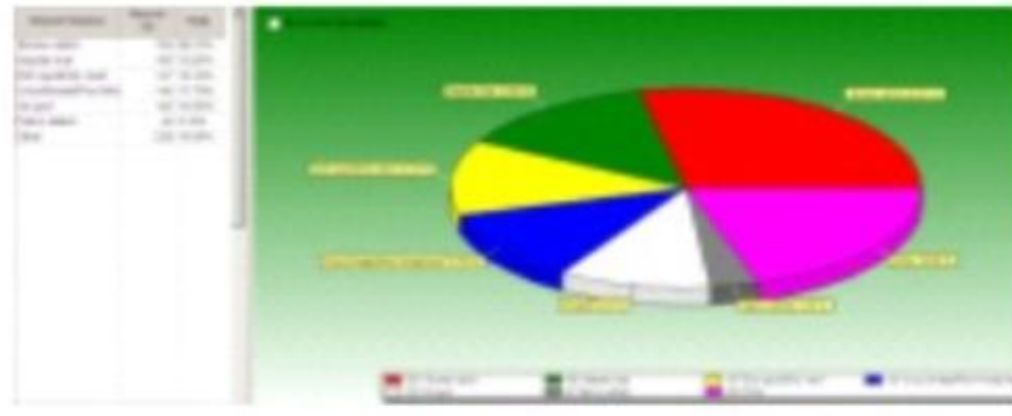# The software of intelligent hanger system

Support real-time monitoring
tools for production schedule

Make production tightly close to delivery date,
help to resolve the trouble of delay delivery

Support real-time monitoring
tools for line balancing

Let manager get the real-time quality question on the live,
timely correcting the trend analysis of defect question and
warning in advance

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TMIS
Time Management
Integrated System