



The Quality Journey of New Territories West Cluster, Hong Kong

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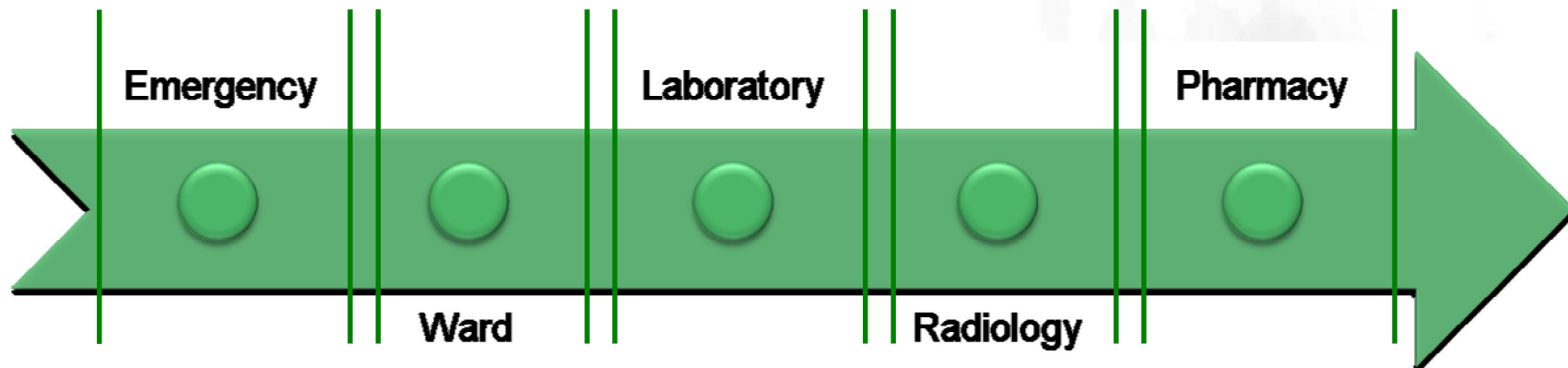
The Sick Hospital

- Medical treatment improves with new drugs, equipment, technology and procedures.
- Delivery of health care becomes more complex.
- Hospitals grow with little thoughts on efficiency or effectiveness.



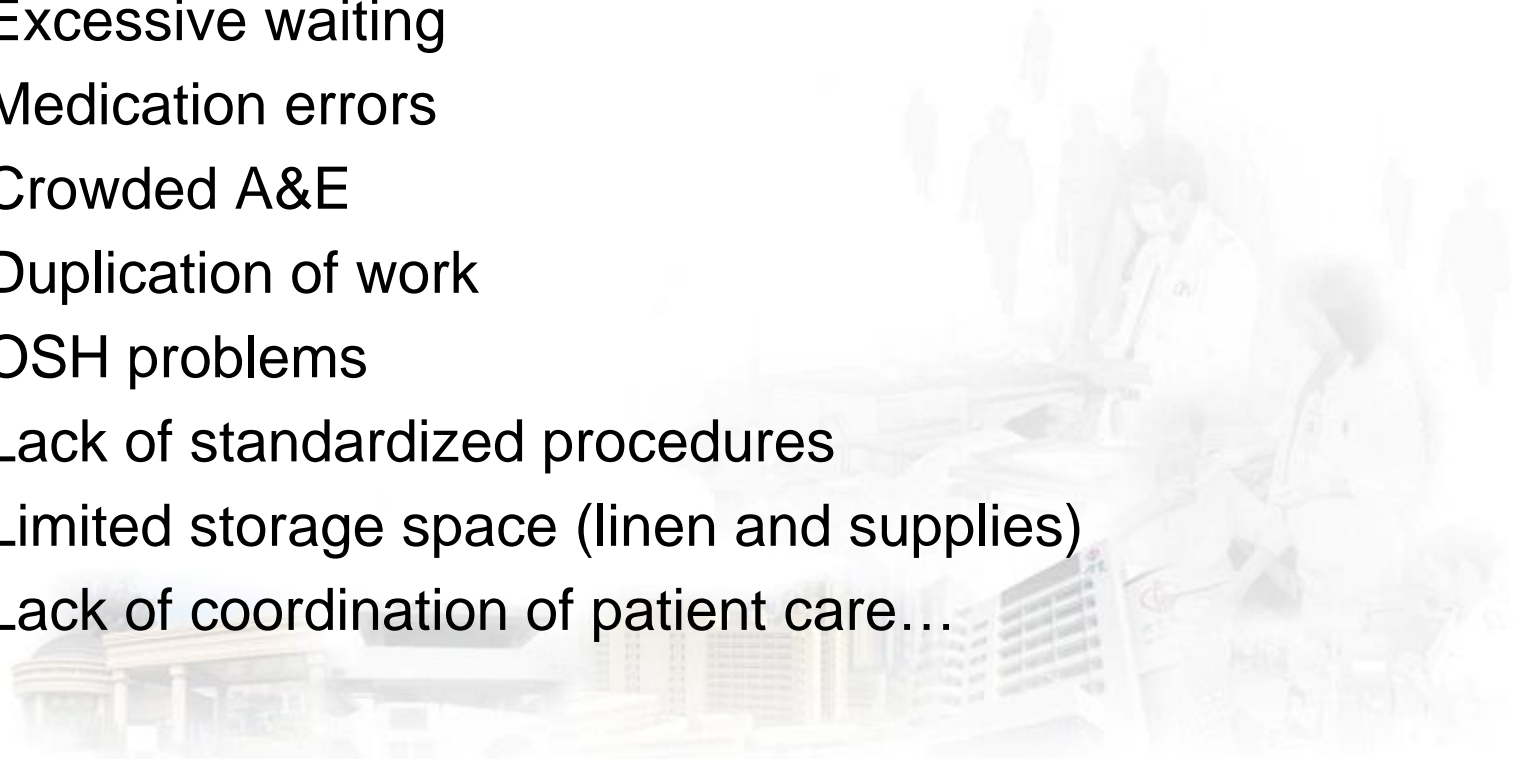
Processes in Healthcare

- Healthcare, like all other industries, is composed of many processes.
- Typically, care in a hospital is organized around different functions.
- Individual elements are not integrated into a coherent whole required for safe, effective care.
- Non-value added activities lead to wastes.



The Long List of Symptoms

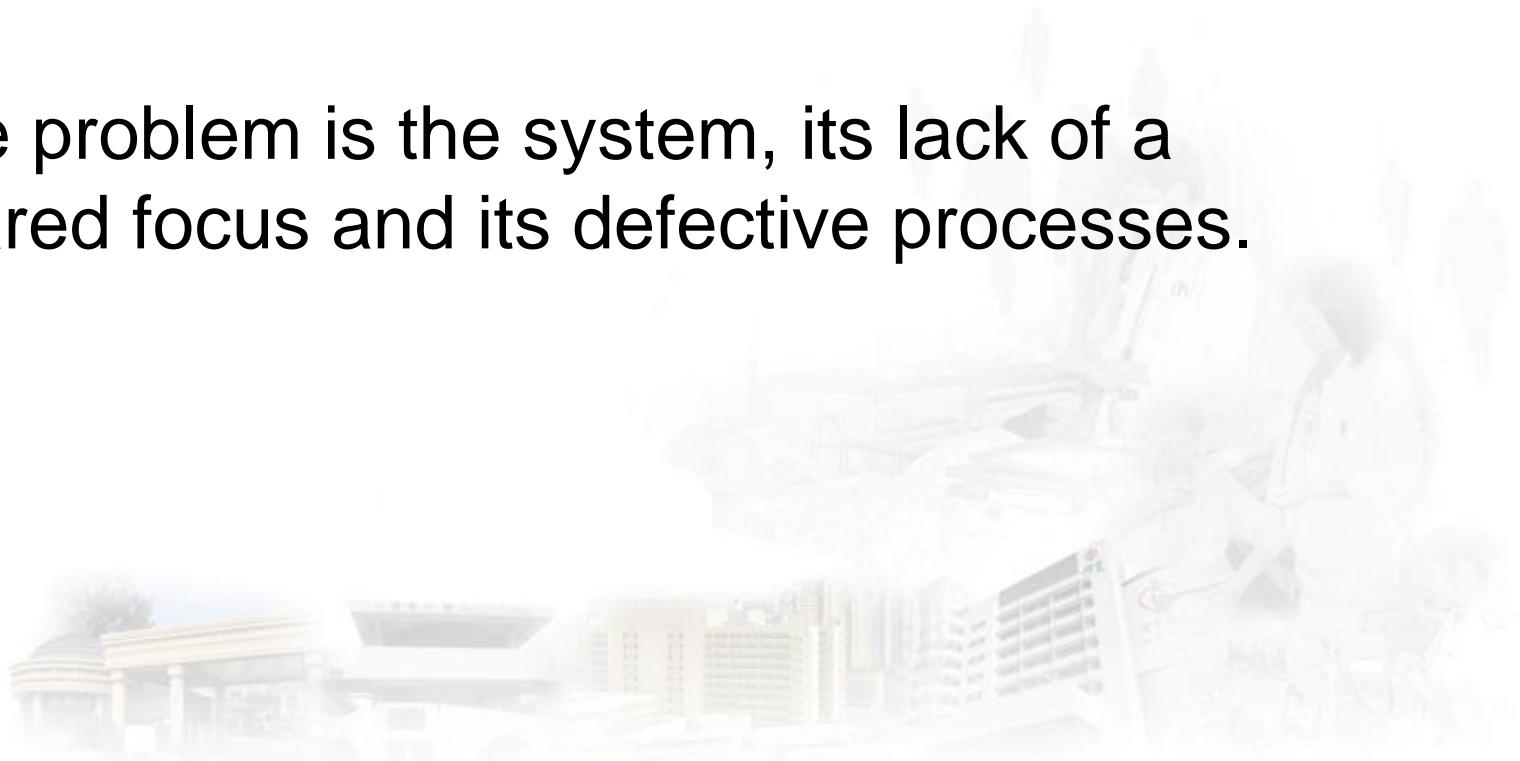
- Do you have any of these problems in your hospital?
 - Dissatisfied patients
 - Excessive waiting
 - Medication errors
 - Crowded A&E
 - Duplication of work
 - OSH problems
 - Lack of standardized procedures
 - Limited storage space (linen and supplies)
 - Lack of coordination of patient care...





The Sick Hospital

- The problem isn't the people working in hospitals.
- The problem is the system, its lack of a shared focus and its defective processes.





Perfect Processes?

- A process is a set of actions or steps, in proper sequence at the proper time to create value for a customer or patient.
- A perfect process creates precisely the right value for the customer.
- A perfect process is also satisfying for people to perform, managers to manage, and customers to experience.



Process Management is **Not** New to Healthcare

- *“Surgical nurse hand instruments to surgeons as called for, instead of the surgeon taking time away from the patient to retrieve them.”*

Frank Gilbreth, 19th century



Lilian and Frank Gilbreth





What do the Healthcare Experts Say?

- The Institute for Healthcare Improvement believes that many management and operations tools in other industries can be applied successfully to health care.

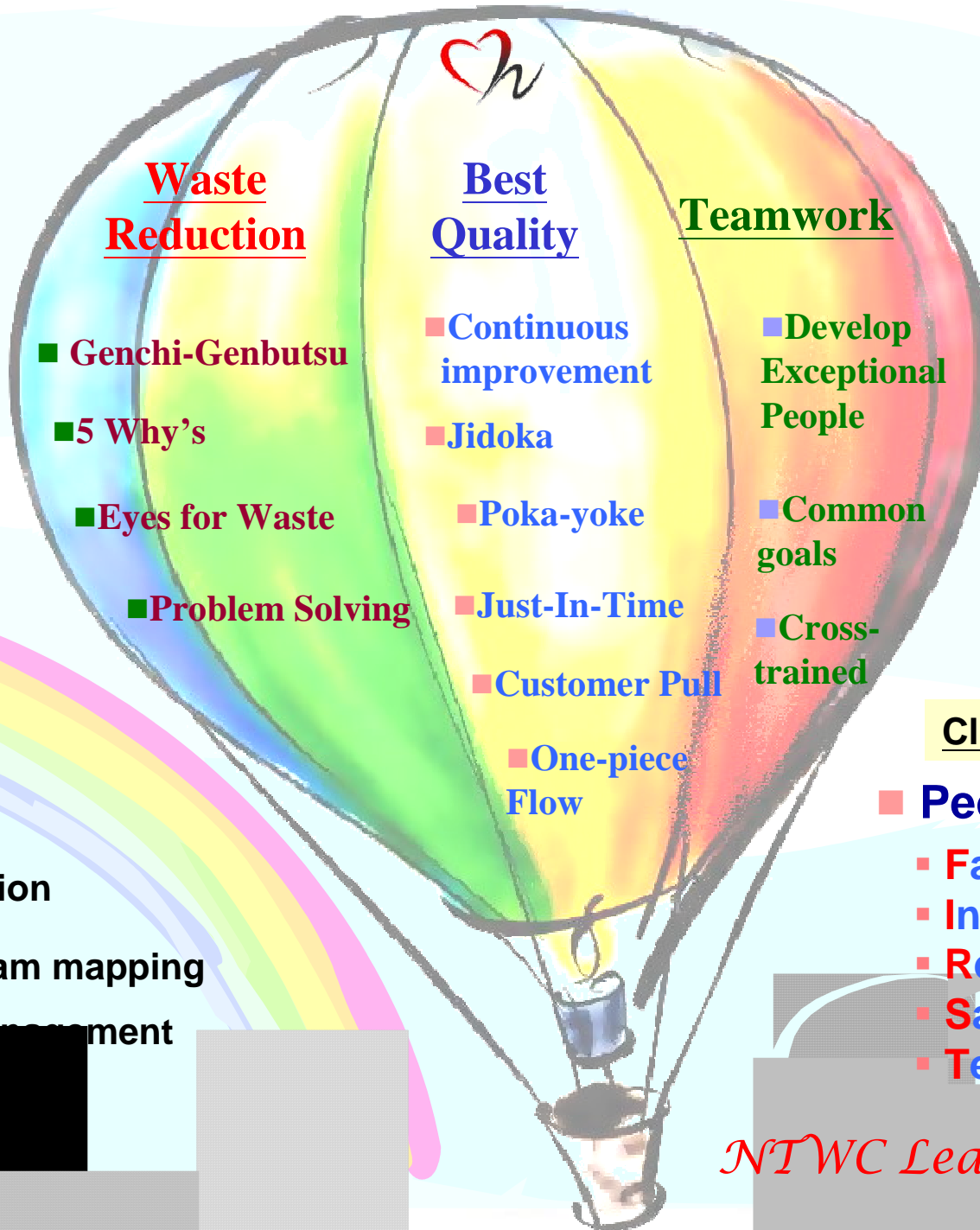




Philosophy

- Seeing and improving the system, rather than blaming individuals.
- Oftentimes, waste is so insidious that the organization is blind to it.
- Improving the system in a concerted manner where staff of all levels are involved.





Waste Reduction

- Genchi-Genbutsu
- 5 Why's
- Eyes for Waste
- Problem Solving

Best Quality

- Continuous improvement
- Jidoka
- Poka-yoke
- Just-In-Time
- Customer Pull
- One-piece Flow

Teamwork

- Develop Exceptional People
- Common goals
- Cross-trained

Tools

- Standardisation
- Value stream mapping
- Visual management
- 5S

Cluster Values

- **People FIRST**
- Fairness
- Innovation
- Respect
- Safety
- Teamwork

NTWC Lean Balloon



Philosophy

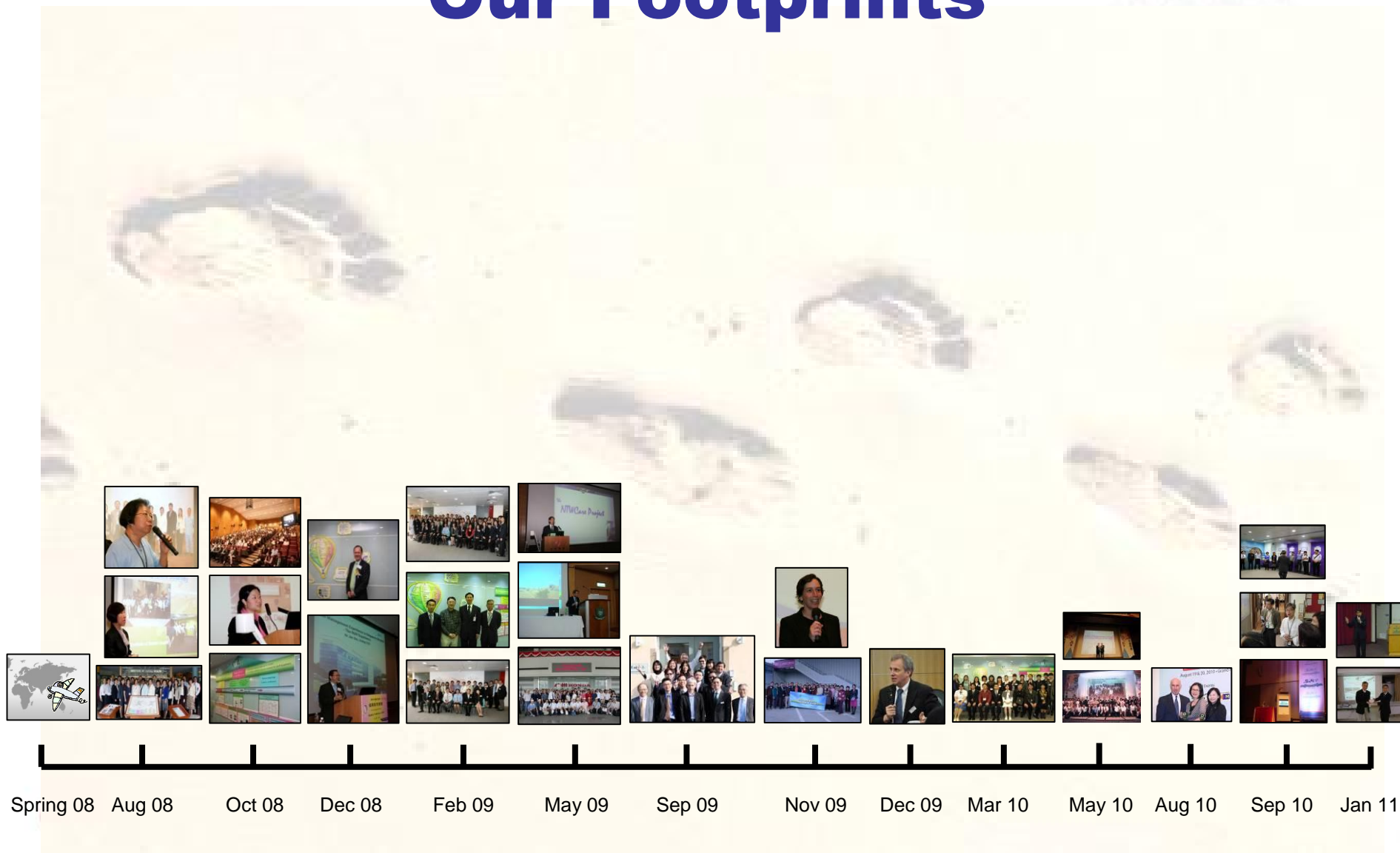
Wastes created due to facility or technology limitations, unchallenged practices.

The 7 Wastes to be Eliminated

1. Overproduction and early production
2. Waiting
3. Transportation
4. Inventory
5. Motion
6. Over-processing
7. Defective units



Our Footprints



People Development



From Better Workflow to People Centred Care



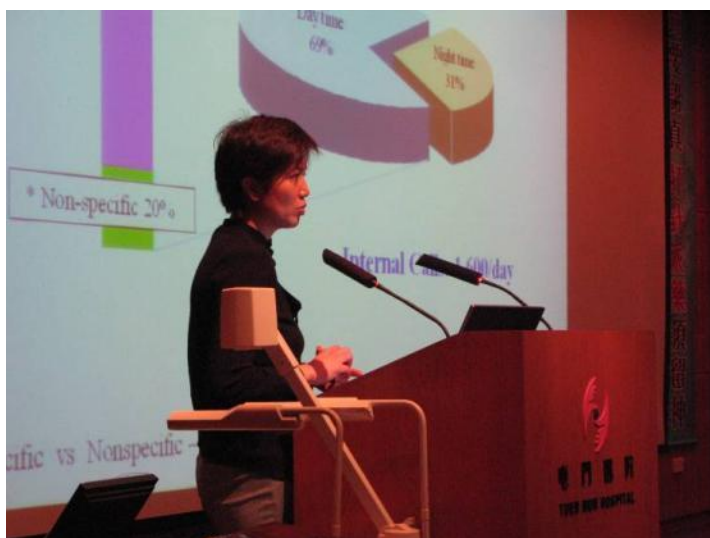
Advanced Level
• 40 graduated

Intermediate Level
• 615 trained

Basic Level
• 4,874 participated

Learning & Sharing

- Our Monthly Sharing



Senior Walkrounds

- Since Jul 09
 - Recognition
 - Support and advise
 - Promulgate good practice
- News Express

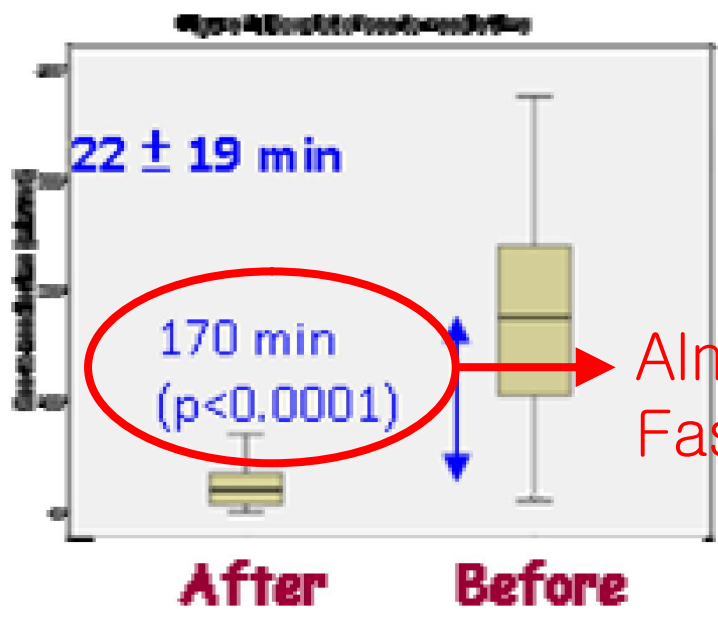


Example in NTWC

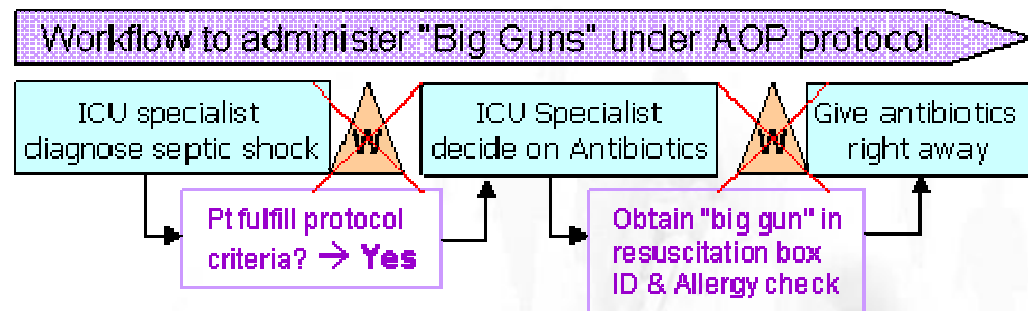
Antibiotics Optimization Programme in septic shock patients requiring ICU admission

- Set up protocol on administration of broad spectrum antibiotics by ICU consultation

Boxplot of see-to-needle time



Almost 3 hours
Faster!!!



Revised resuscitation kit

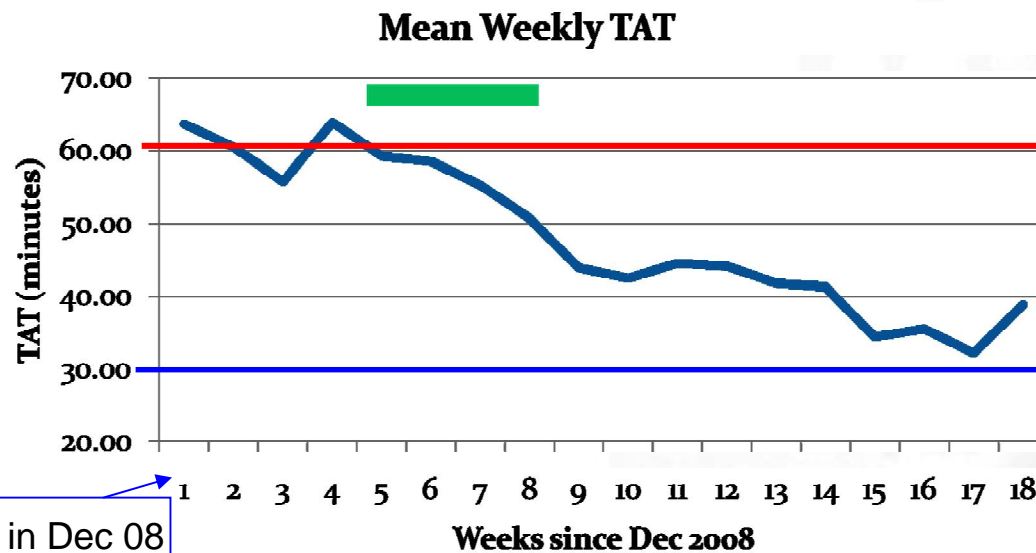
Example from Intensive Care Unit, TMH

Example in NTWC

Reducing turnaround time for blood coagulation test

1. Rearrange specimen arrival
→ Demand leveling

2. Review repeat test criteria
→ Reduce over-processing



Service Pledge:
60 min

Ideal target:
30 min*

*target met a few weeks after week 18

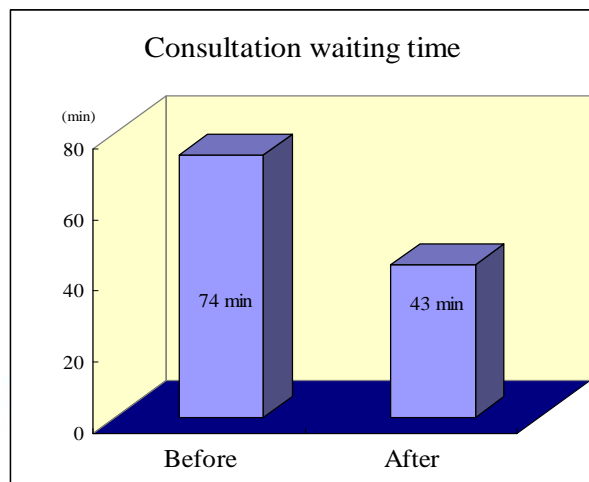
Improvement starts in Dec 08



Example from Department of Clinical Pathology, TMH

Example in NTWC

Task	Purpose
Design time-slot system in existing IT platform	Tackle patient batching
Redesign workflow of patient record management	Smoothen patient flow/reduce interruption to doctors
Rearrange consultation rooms in different buildings	Facilitate patient flow
Design automated visual panels	Convey real-time waiting status



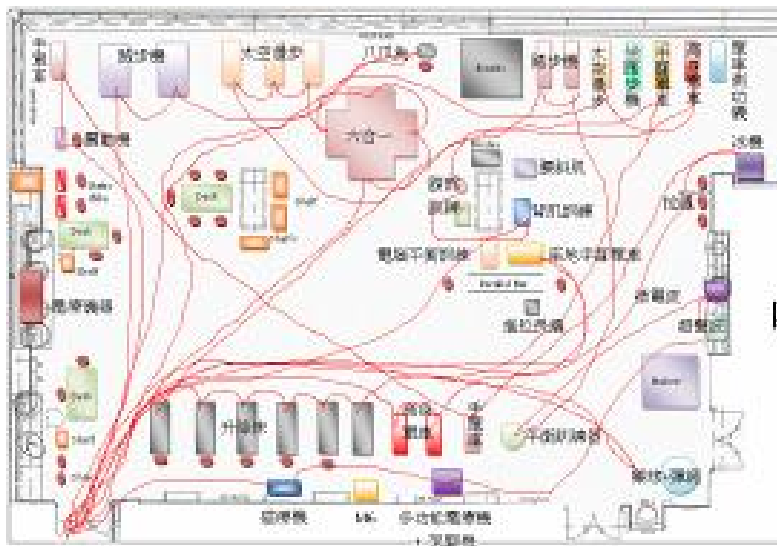
A reduction of 31 minutes (41%) in consultation waiting time was achieved.

Example from Tuen Mun Mental Health Centre, CPH

Example in NTWC

Equipment Checking System

- Redesigning workflow for daily equipment checking



Time required each day

Before	30 mins
After	18 mins (↓ 40%)



Example from Physiotherapy Department, TMH

Example in NTWC

Redefine default A/C settings

Annually energy savings = 168,986 kWh

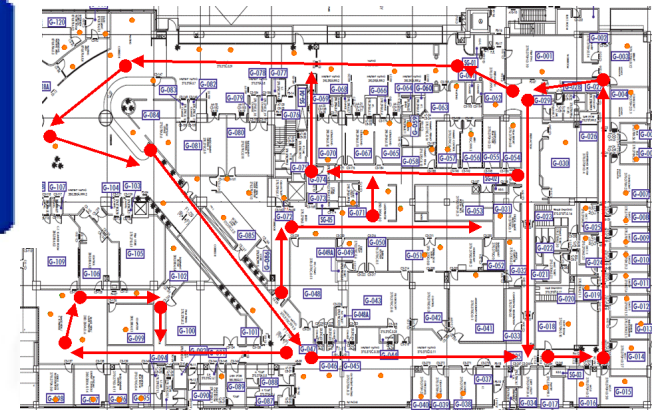
= **118.29 tonnes CO₂ emission**

Reduced >10k steps in staff motion in adjusting A/C temp every year

Agreement on de-lamping

Annual energy savings = 18492 kWh

= **12.94 tonnes CO₂ emission!!**



Conservation Items	Projected Annual Savings (\$)
A/C Savings	\$139,854.06
Delamping Savings	\$54,455.04
Total	\$194,309.91

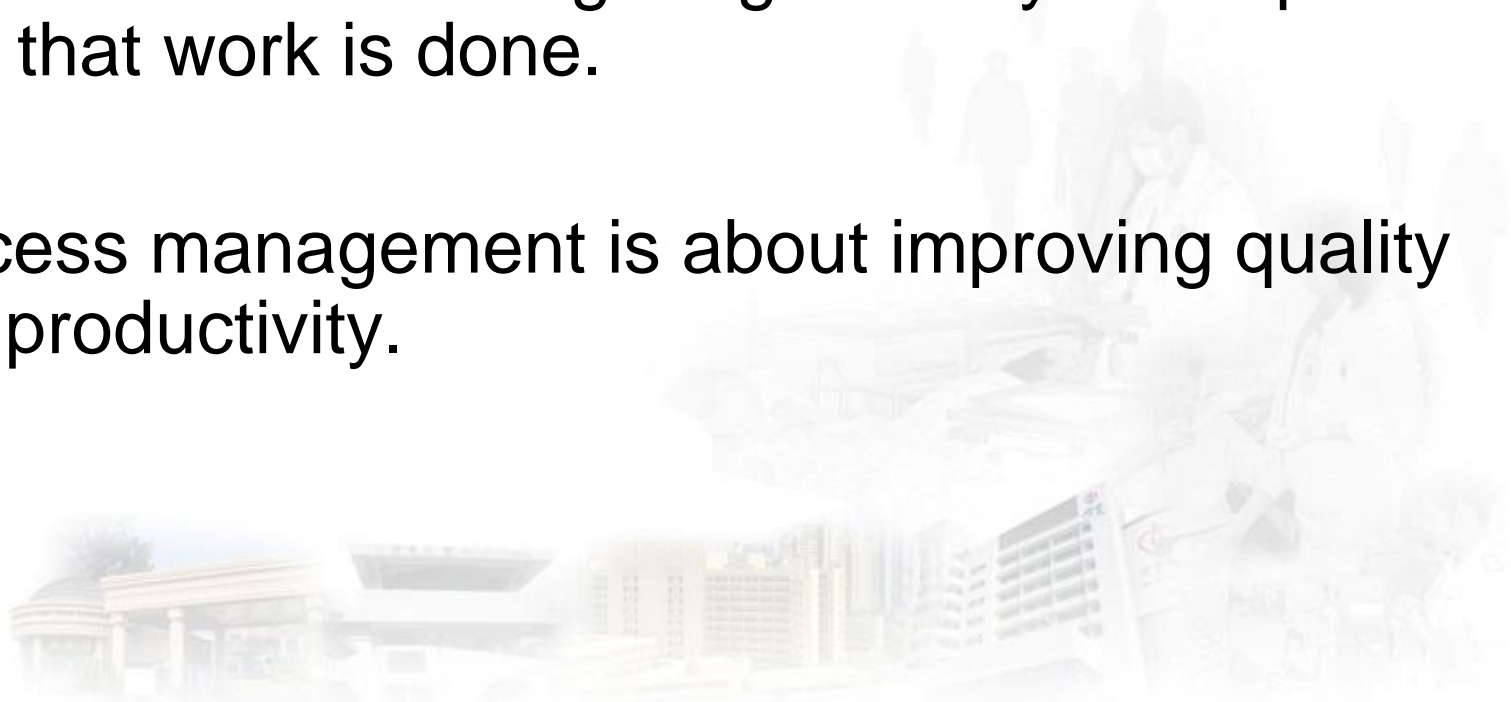


Example from Administrative Department, POH



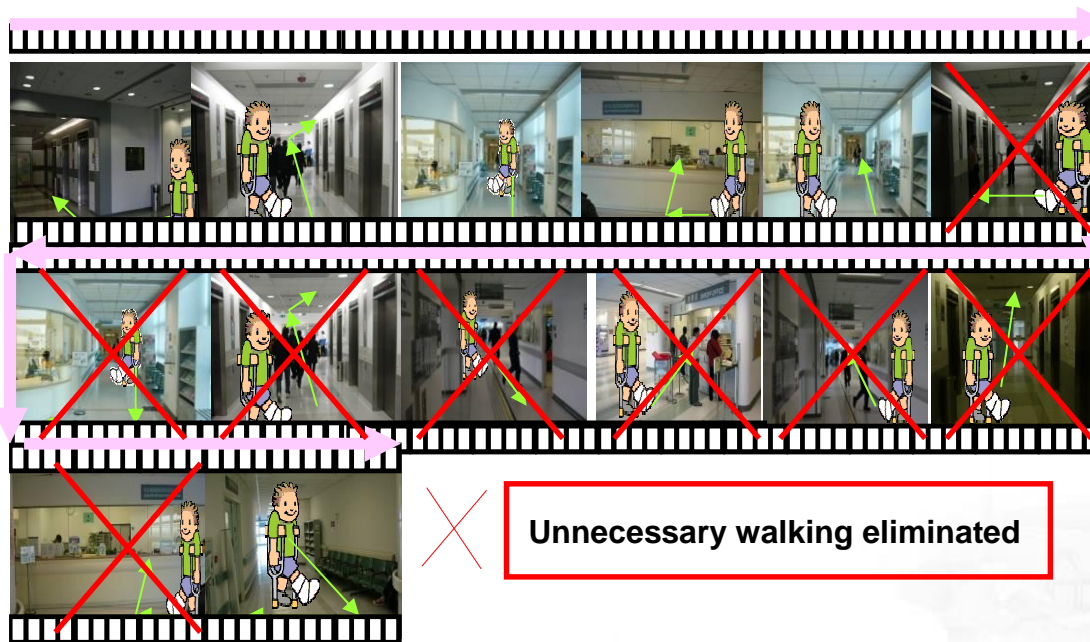
Conclusions

- Process management is working.
- Process management is about looking at how we do our work and figuring out ways to improve how that work is done.
- Process management is about improving quality and productivity.



Example in NTWC

Simplify waiver arrangement for A&E fracture cases at occupational therapy dept.



Savings	
Walking distance	180 meters less
Occupational therapist waiting time	15-30 minutes less for each case

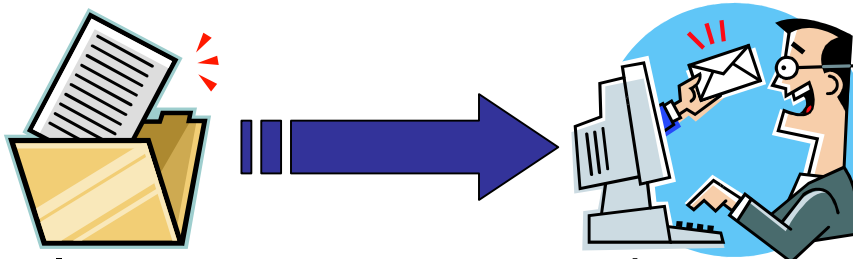
19 patients benefited per month



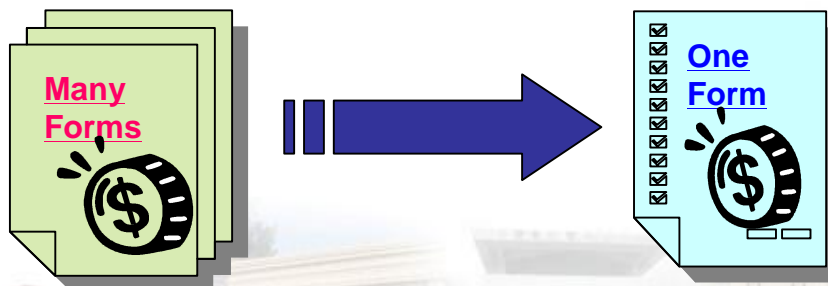
Example in NTWC

Revamping of T&D workflow

- Redesign workflow of training application
- e-communication within HR



- Improve payment procedures
(both direct payment and reimbursement items)



Save 5400
pieces of paper
per year

Applicants
receive approval
8.5 days earlier

Reduced unnecessary
transactions b/w
applicants and admin staff

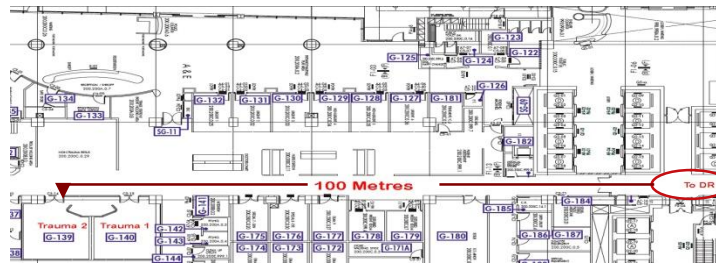


Example in NTWC

Relocate DR equipment to A&E Trauma Room

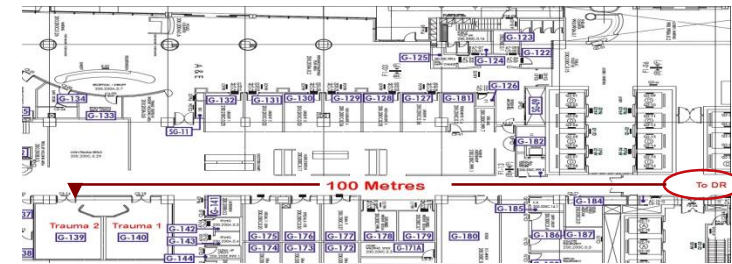
Urgent X-ray in A&E

Before



Radiographer runs 100x3
= 300 meters!

After



Radiographer travels once only
100 meters

- More timely treatment: Radiography processing time reduced by up to 26 mins



Example in NTWC

Reconfigure items in blood taking trolley

- Motion reduced. Efficiency enhanced
 - Blood taking preparation from 30 sec to 15 sec
 - Over 700 procedures in concerned ward



Before

After



Summary on Selected Projects

- Quantifiable results from select projects

	Saving per year
Patient waiting in hospital (minutes)	116,449 hours
Reduced appointment delay (days)	31,884 days
Staff time (minutes)	1,253 hours

Combined result of 14 selected projects in NTWC hospitals

