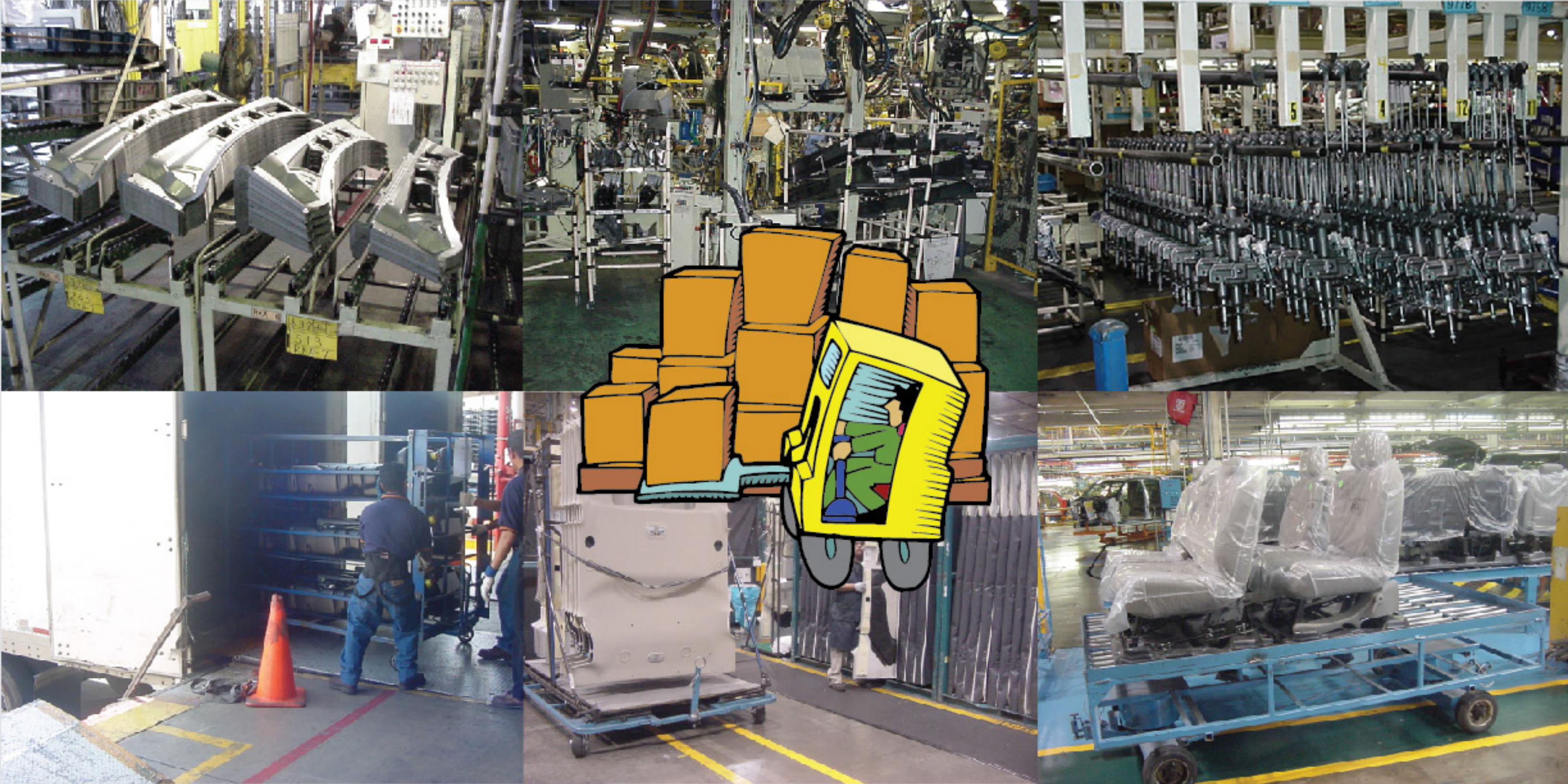


MINOMI

PARTS DELIVERY STRATEGY

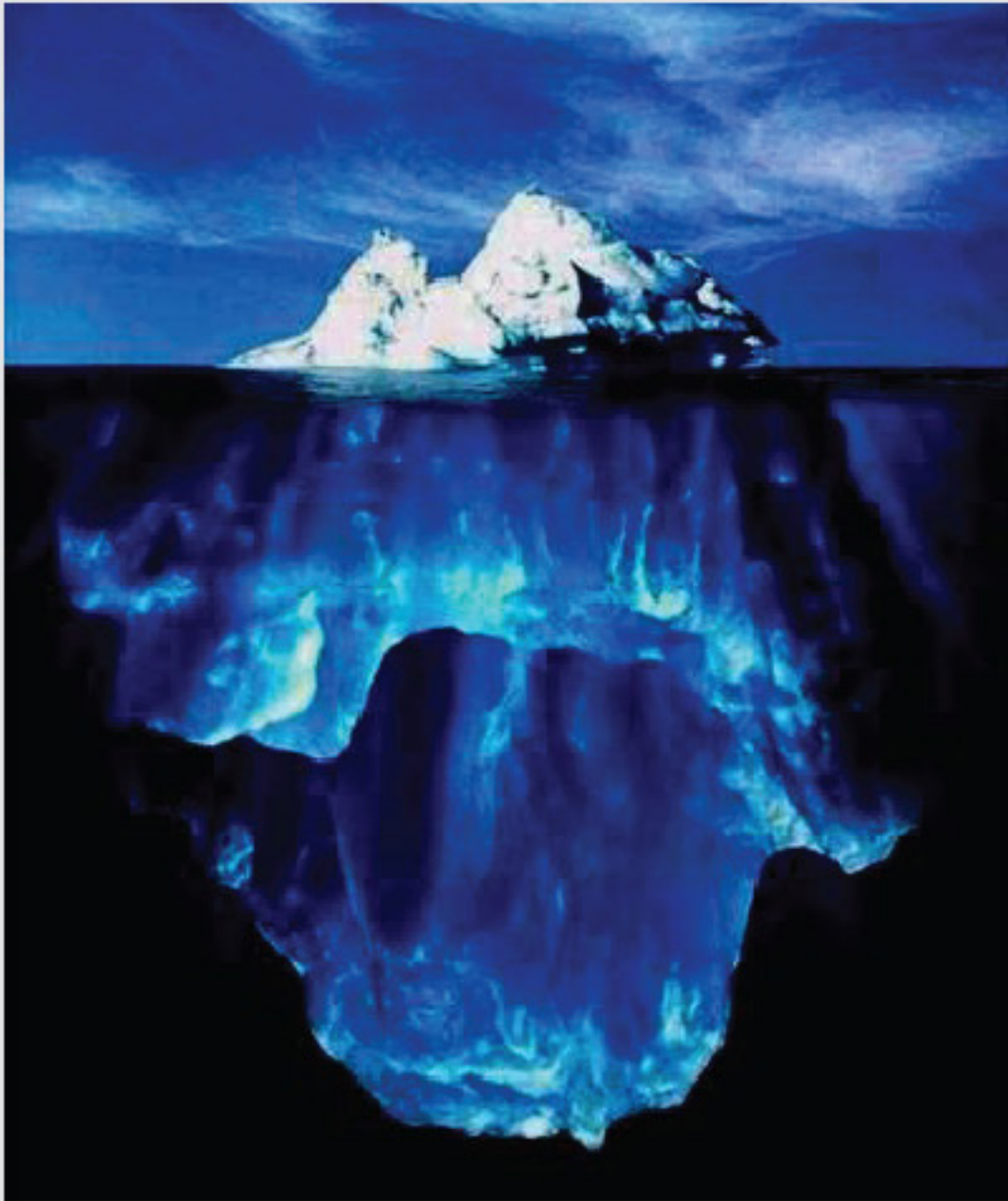


ABSOLUTE SAFETY

Security is above everything

All accidents can and must be prevented

Safety is a Shared Responsibility



TAKE TWO



MINUTES

WORK



TAKE CARE FOR
YOUR PARTNER



DO



FAMILY

CHILDREN



PURPOSE

THE PURPOSE OF THIS COURSE IS SET METHODS
STRATEGY AND BENEFITS OF PARTS DELIVERY.

“MINOMI”

AGENDA

- DEFINITIONS
- BENEFITS
- EXAMPLES
 - NUMMI
 - GENERAL MOTORS
 - TOYOTA

TRANSLATION

COMBINATION REPRESENTS MINOMI
2 JAPANESE WORDS

MI = CONTENTS AND NOMI = ONLY

MINOMI - CONTENT ONLY MEANS

"WITHOUT PEANUT SHELL"



MINOMI:

CONTENT ONLY MEANS

IT IS A PARTS DELIVERY STRATEGY
TO ELIMINATE WASTE OPERATIONS PRODUCTION

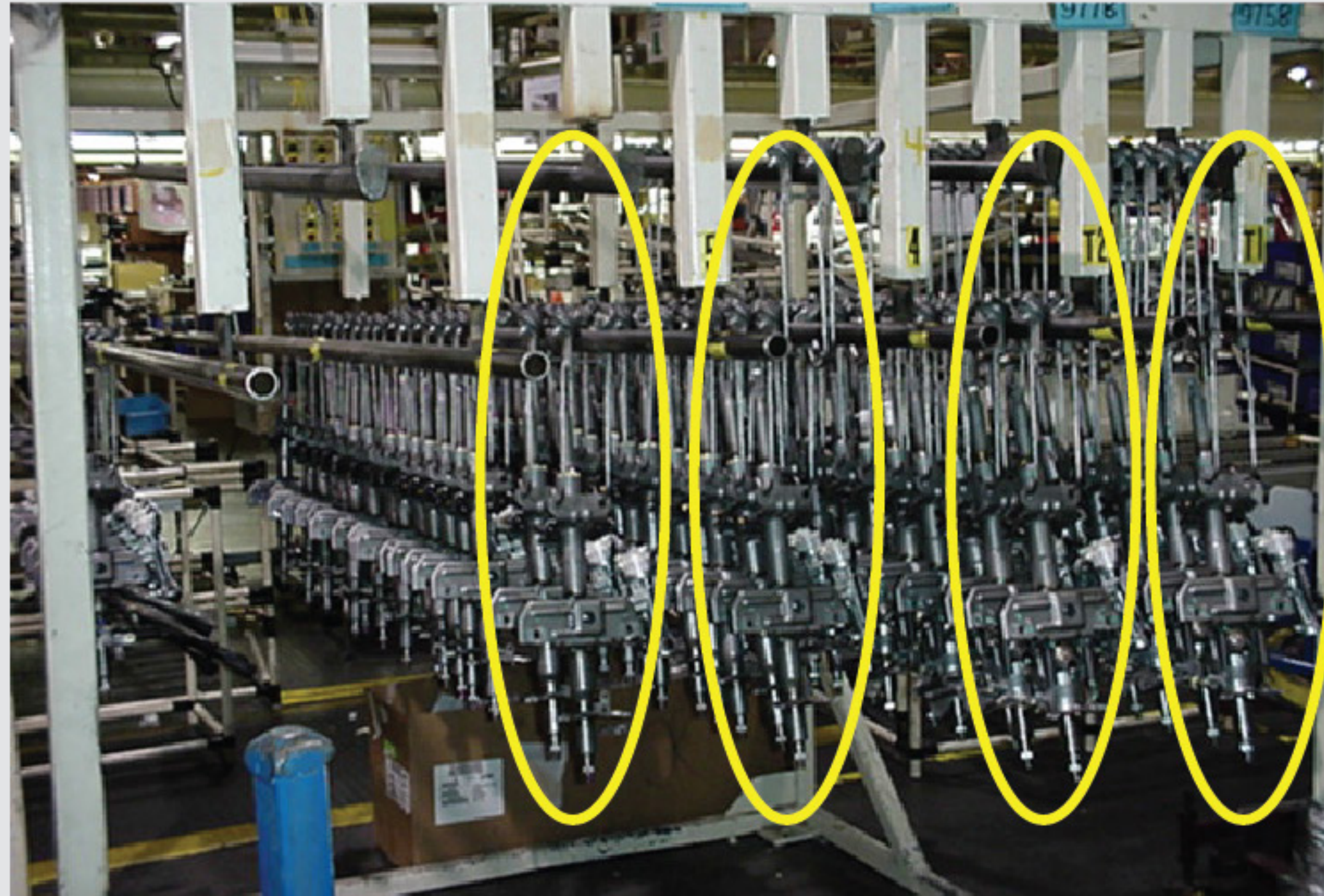
MINOMI:

CONTENT ONLY MEANS

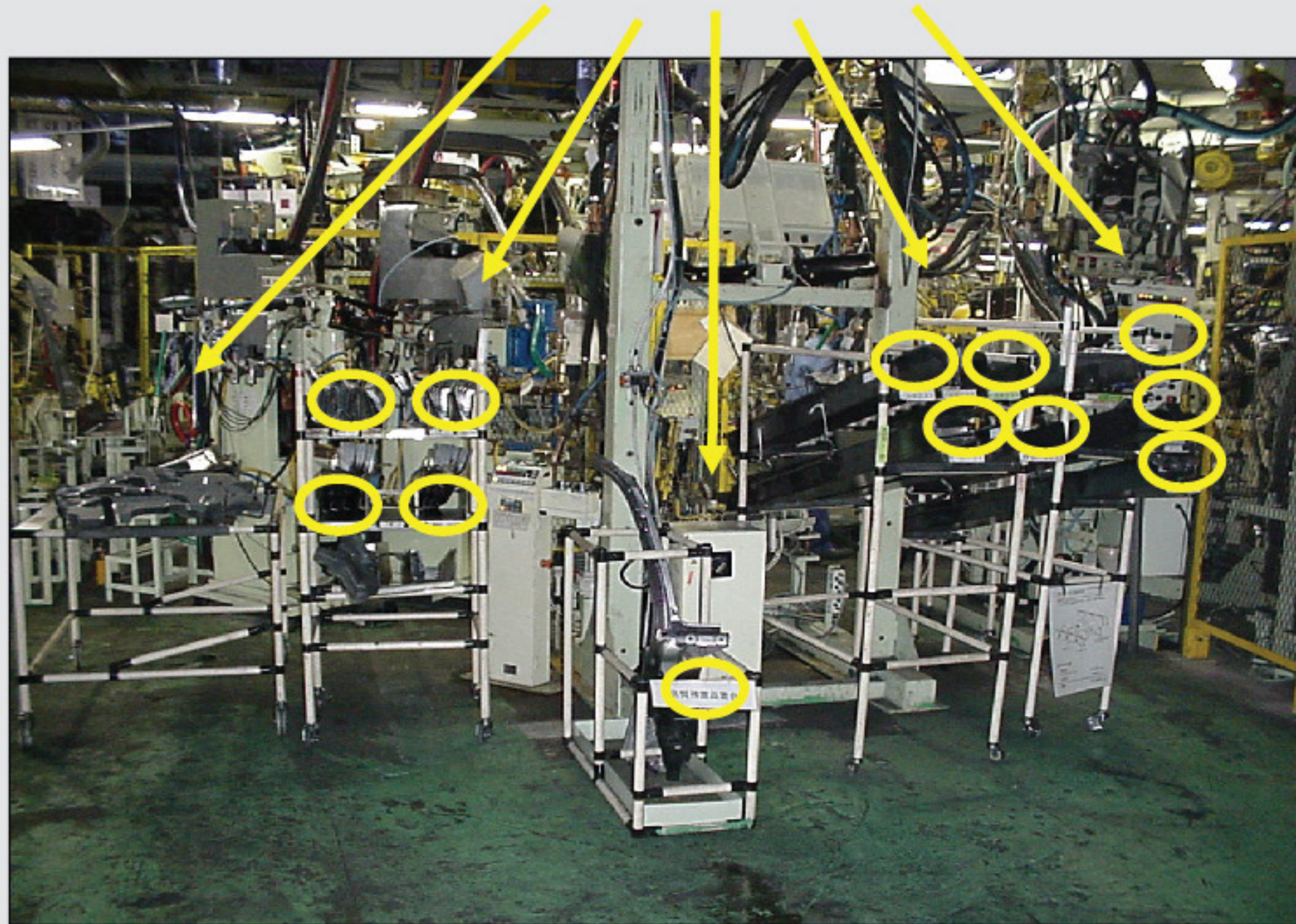
IT IS A PARTS DELIVERY STRATEGY
TO ELIMINATE WASTE OPERATIONS PRODUCTION



THEY ARE PRESENTED IN MULTIPLE PARTS LINES



THEY ARE PRESENTED IN MULTIPLE PARTS LINES



OPERATIONS OF HIGH DENSITY



**Where are the empty containers?
Where are the separators?**

BENEFITS

TO SUPPORT THE PRODUCTION SYSTEM

WASTE ELIMINATION

CORRECTION
OVERPRODUCTION
OPERATOR MOVEMENT
MATERIAL MOVEMENT
WAITING
INVENTORY
PROCESS

CORRECTION

PROMOTES FIRST INPUTS
FIRST OUTPUT (PEPS / FIFO)

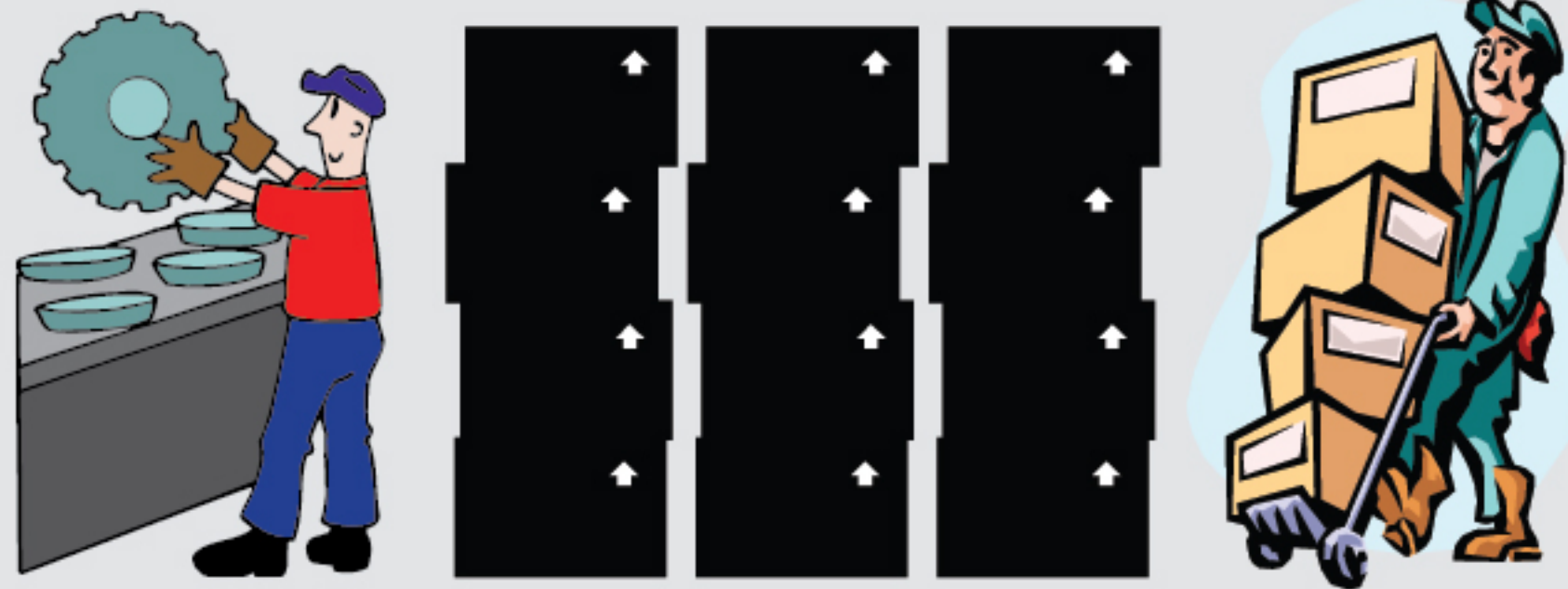
ENO MATERIAL DAMAGE BECAUSE OF
OPERATIONS WITH COUNTERBALANCE



OVERPRODUCTION

PRODUCERS NEEDED

REMOVED THE "LOADING MATERIAL"
IN STATION - NO CONTAINERS



MOVEMENTS

ELIMINATION CONTAINER HANDLING

2 SEC PER CONTAINER HANDLING (PRODUCTION)

3 SEC FOR CONTAINER HANDLING (CHOICE)

(STANDARD TIME)

WALK OVER

MATERIAL MOVEMENT

DIRECT DELIVERY ONLINE

ELIMINATION OF TRANSFERS

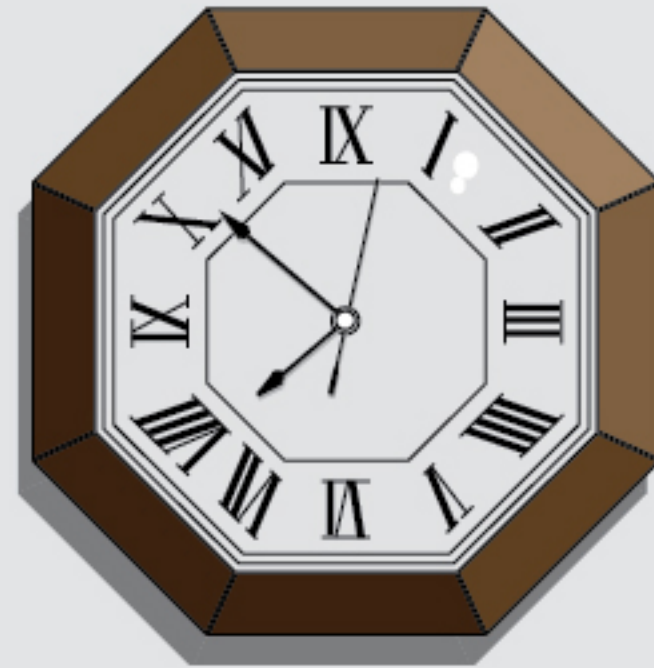
REDUCE INVENTORY ONLINE

WAITING

WAITING FOR CHANGES IN CONTAINERS

BOARD ANDON

ONLINE



INVENTORY

GREATER VISIBILITY
ELIMINATION OF TRANSFERS
NO BOXES
DIRECT MATERIAL SUPPLIER
ELIMINATION OF STORES
ELIMINATION INVENTORY
COMBINE WITH SMALL LOTS
INVENTORY



TEAM MEMBER "MET"
"NO TRANSFERS" ONLINE
NO HANDLING EMPTY CONTAINERS
CONTAINER HANDLING (LOGISTICS)



WHEN WE USE MINOMI?



ANALYZE THE SITUATION

STANDARD WORKING DOCUMENT

FLOW ON ONLINE

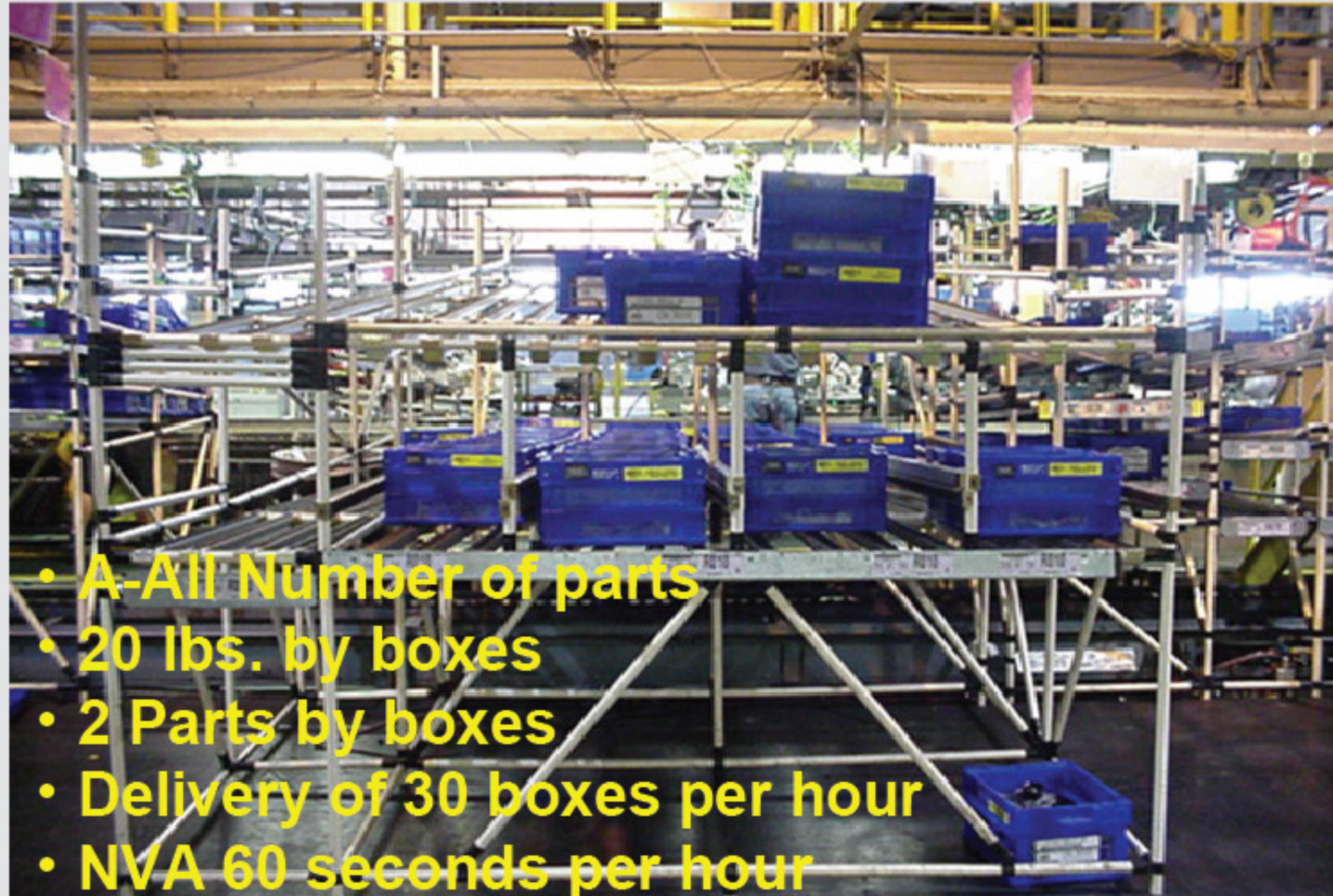
REVIEW FREQUENCY OF DELIVERY

ERGONOMIC ISSUES

DIFFICULTY TO IDENTIFY UNUSUAL SITUATIONS

CALL CRITICAL

ANALYZE THE SITUATION



- A-All Number of parts
- 20 lbs. by boxes
- 2 Parts by boxes
- Delivery of 30 boxes per hour
- NVA 60 seconds per hour

DIRECT SUPPLIER

TRANSFER / SEQUENCED

SEQUENCED

GROUND BY A PROVIDER

SUPERMARKET "WHEELED" / KITS

DOLLY INTERCHANGEABLE (MOTHER / DAUGHTER)

SUPPLIER DIRECT METHODS MINOMI



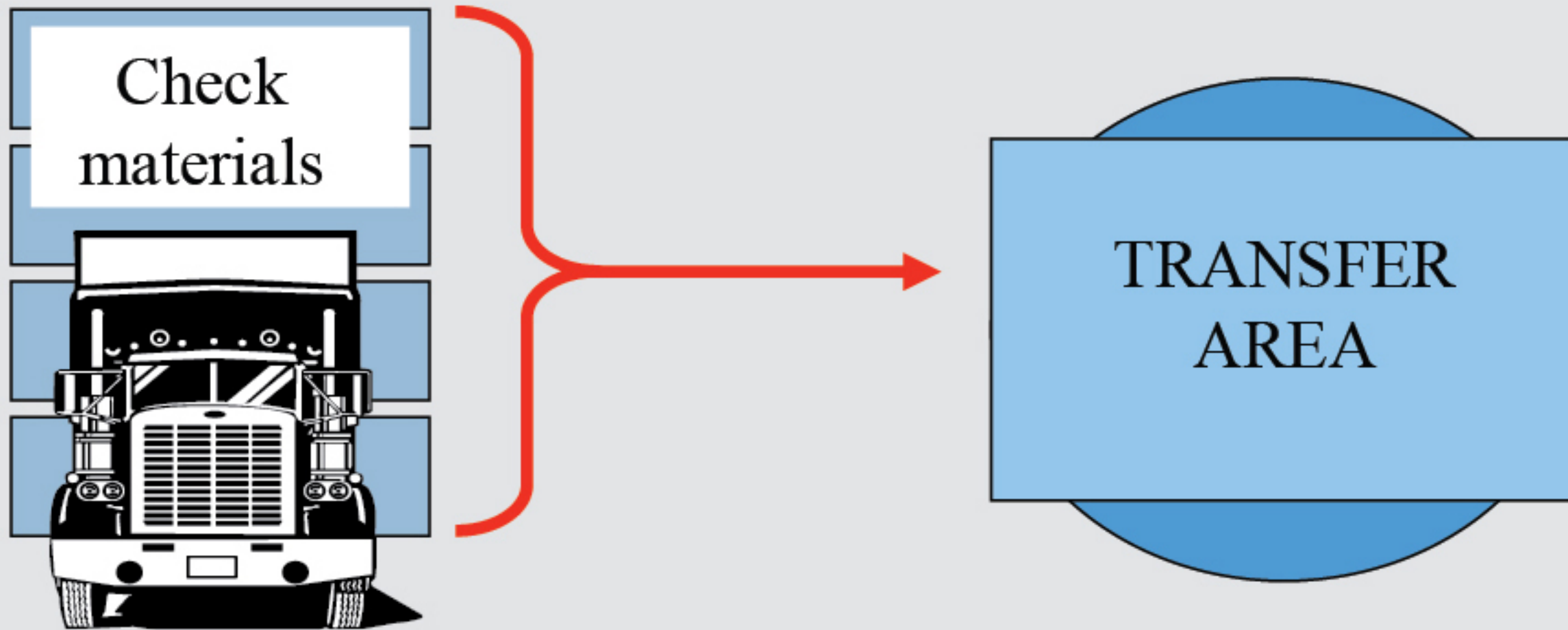
SUPPLIER DIRECT METHODS MINOMI



SUPPLIER DIRECT METHODS MINOMI



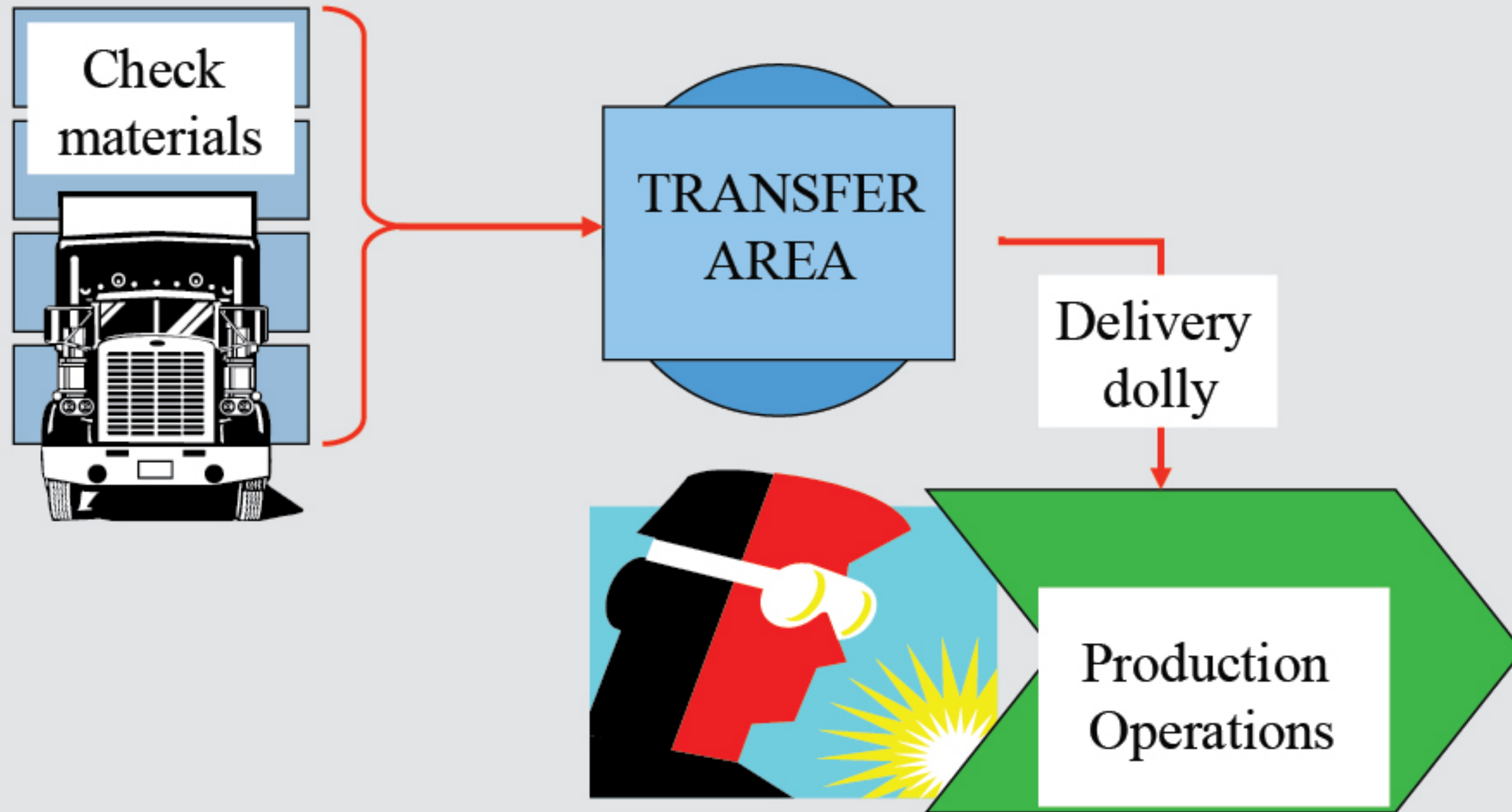
METHOD MINOMI TRANSFER



TRANSFER AREA



TRANSFER FLOW



METHOD MINOMI - TRANSFER



METHOD MINOMI - TRANSFER



METHOD MINOMI - SEQUENCED



METHOD MINOMI - SEQUENCED



SPECIAL DELIVERY FOR DOLLY



SPECIAL DELIVERY FOR DOLLY



PARTS TO TRANSFER STATION



METHODS MINOMI KITS

ASSEMBLY PLANT



METHODS MINOMI KITS

ASSEMBLY PLANT



METHODS MINOMI - SUPERMARKET "WHEELED"



DIRECTO DEL PROVEEDOR
TRASPALEO O SECUENCIADO
EN PLANTA POR UN PROVEEDOR.
SUPERMERCADO SOBRE RUEDAS / KITS
DOLLY INTERCAMBIABLE (MADRE / HIJA)

METHODS MINOMI DOLLY INTERCHANGEABLE MOTHER - DAUGHTER



METHODS MINOMI DOLLY INTERCHANGEABLE MOTHER - DAUGHTER



METHODS MINOMI DOLLY INTERCHANGEABLE MOTHER - DAUGHTER



METHODS MINOMI DOLLY INTERCHANGEABLE MOTHER - DAUGHTER



METHODS MINOMI COMBINED DELIVERY



BENEFITS STATION

IIINCREASE VALUE ADDED WORK

IMPROVED ERGONOMICS

REDUCE OPERATOR ENVIRONMENT

PROMOTES "INPUTS FIRST FIRST-OUT

INVENTORY REDUCTION IN STATION

ELIMINATES THE LOADING OF MATERIAL IN STATION

SAFETY

HOUSEKEEPING

BENEFITS

IMPROVED ERGONOMICS

ELIMINATION OF EMPTY CONTAINERS HANDLING

PROMOTES THE STANDARD WORK

OPPORTUNITY TO DELIVER MULTIPLE PART NUMBERS.

IMPROVING THE EFFECTIVENESS

ELIMINATES THE USE FORKLIFT

SAFETY

MAINTENANCE COST REDUCTION

CONTAINERS / HARM REDUCTION TO PARTS

PURPOSE

THE PURPOSE OF THIS COURSE IS SET METHODS
STRATEGY AND BENEFITS OF PARTS DELIVERY

“MINOMI”

BENEFICIOS

MEJORA ERGONOMÍA

ELIMINACIÓN DE MANEJO DE CONTENEDORES VACIOS

PROMUEVE EL TRABAJO ESTÁNDAR

OPORTUNIDAD DE ENTREGAR MÚLTIPLES NÚMEROS DE PARTE.

MEJORA LA EFECTIVIDAD

ELIMINA EL USO DE MONTACARGAS

SEGURIDAD

REDUCCION DEL COSTO DE MANTENIMIENTO

CONTENEDORES / REDUCCIÓN DEL DAÑO A PARTES

PROPÓSITO

EL PROPÓSITO DE ESTE CURSO ES DEFINIR LOS MÉTODOS
Y BENEFICIOS DE LA ESTRATEGIA DE ENTREGA DE PARTES

“MINOMI”