SEW EURODRIVE

Driving Industry 4.0

MOVI-C®

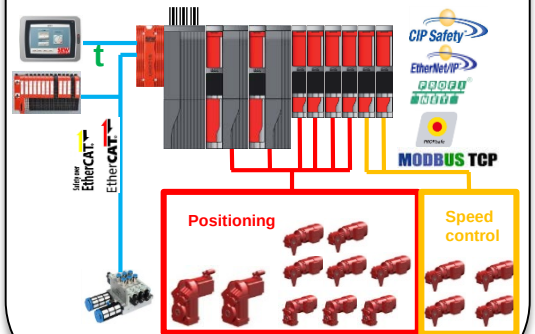
MAXOLUTION: Sistemi per l'Intralogistica

MOVI-C®

Industry 4.0: automazione di Fabbrica avanzata

MOVI Suite
(Real & Virtual Engineering)

MOVI C
(Machine Automation)

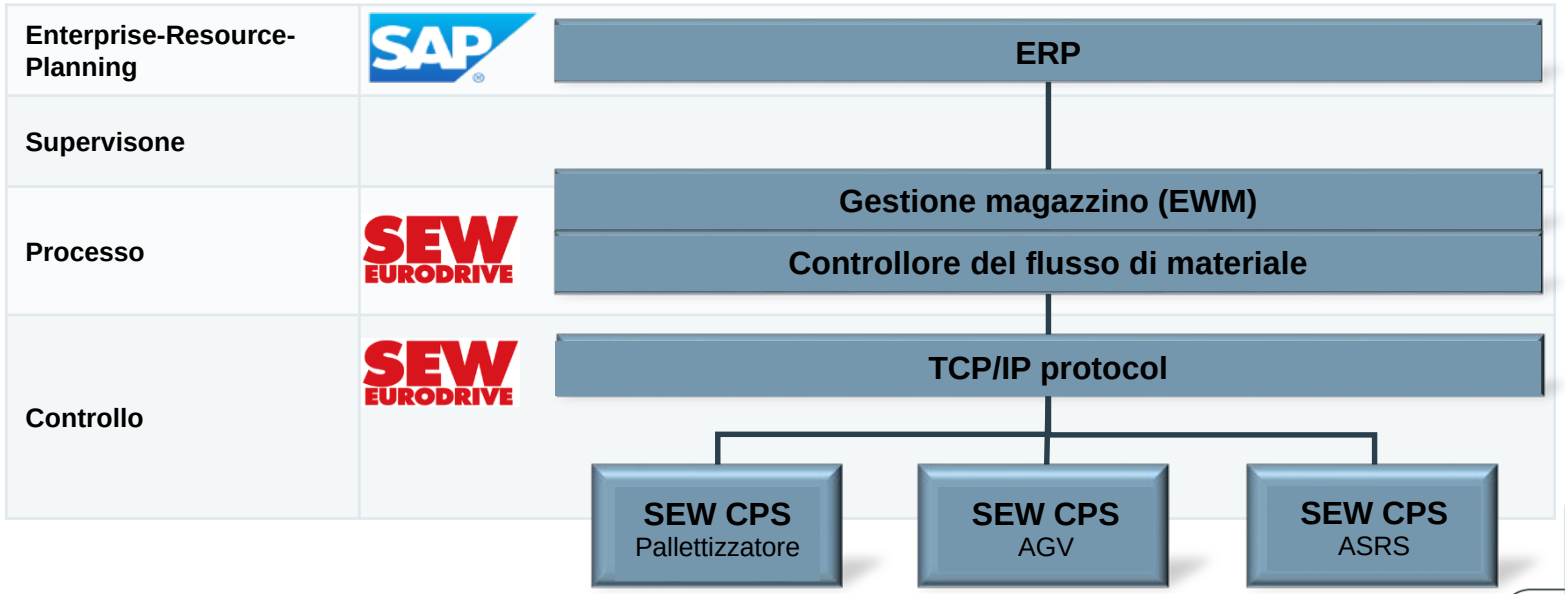


CPS
(Material Handling)

- Flessibilità (Mix prodotti, Mix volumi)
- Produttività (Uptime,Efficienza, Qualità O.E.E.)
- Energy Saving (Green label, rigenerativo)
- Efficienza operativa (TCO,Engineering,Maintenance)

Il mondo IT ed il controllo di campo

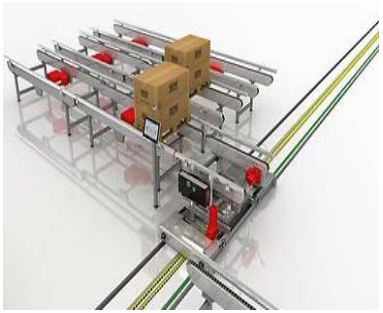
ERP – Enterprise Resource Planning:



CPS

Cyber Physical System

AGV per il trasporto di materiali fra produzione e logistica.
Tecnologie : Motion Control, HMI, drives, motoriduttori, sistemi per la comunicazione Wi-Fi, Energy buffer.

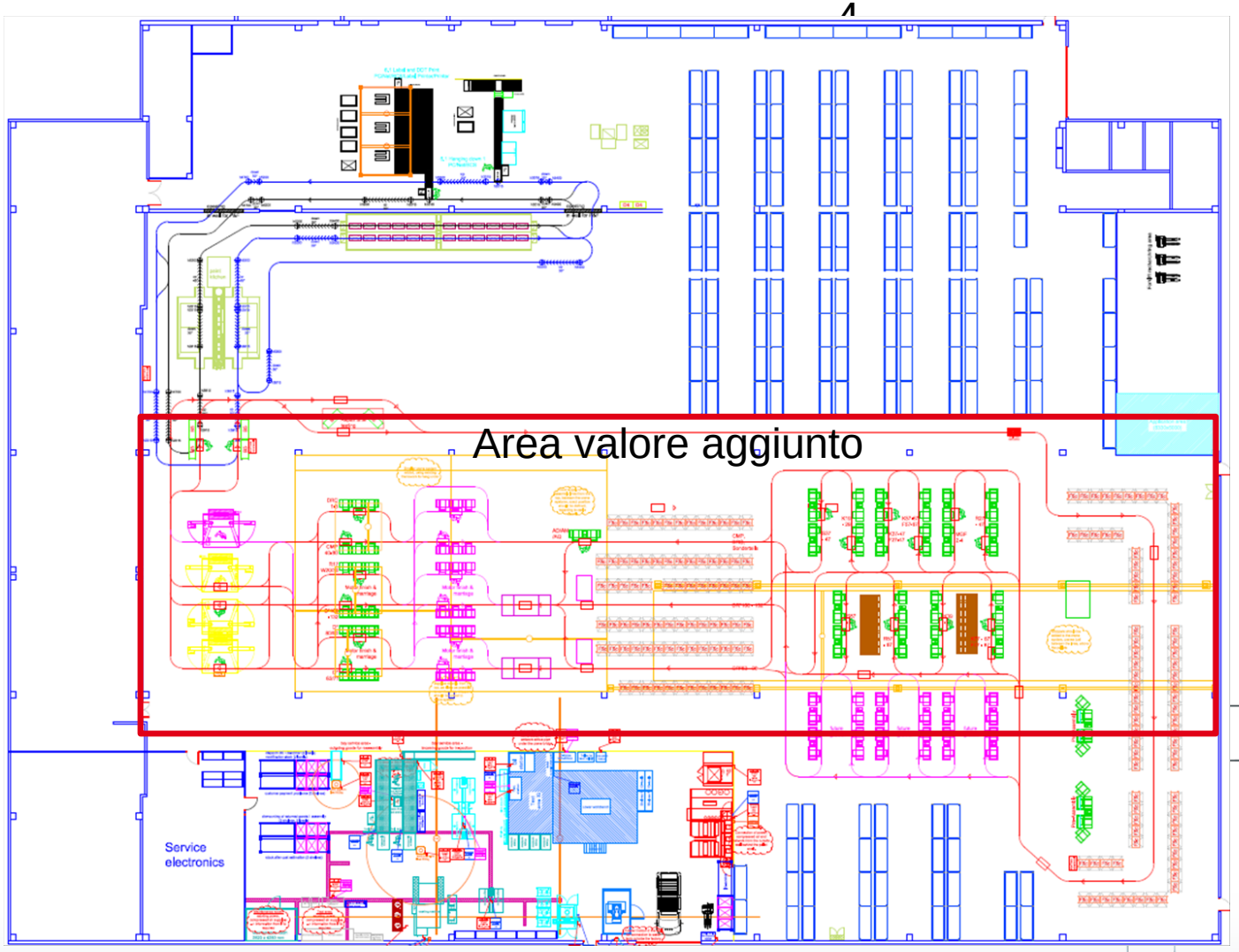


Transfer pallet per il trasporto di materiali fra produzione e logistica.
Tecnologie : Motion Control, HMI, drives, motoriduttori, sistemi per la comunicazione Wi-Fi, Energy buffer.

ASRS e transfer shuttle per la gestione dei materiali nei magazzini automatici.
Tecnologie : Motion Control, HMI, drives, motoriduttori, sistemi per la comunicazione Wi-Fi, Energy buffer.

SEW Italia – Industry 4.0

Progetto nuovo layout del reparto assemblaggio in ottica Industry 4.0



SEW Italia – Industry 4.0

Progetto nuovo layout del reparto assemblaggio in ottica Industry 4.0

Target /Obiettivi

- **Aumento dell'output giornaliero**: da 210 gruppi/giorno a 350 gruppi/giorno (+70%)
- **Incremento del mix di prodotti**: alcuni prodotti che saranno inseriti nello spettro di assemblaggio del Plant hanno tempi di assemblaggio circa doppi rispetto ai prodotti attuali
- **Trattamenti speciali**: anticorrosione
- **Miglioramento dei tempi di consegna al mercato**
- **Aumento della produttività in unità a parità di impiegati +25%**

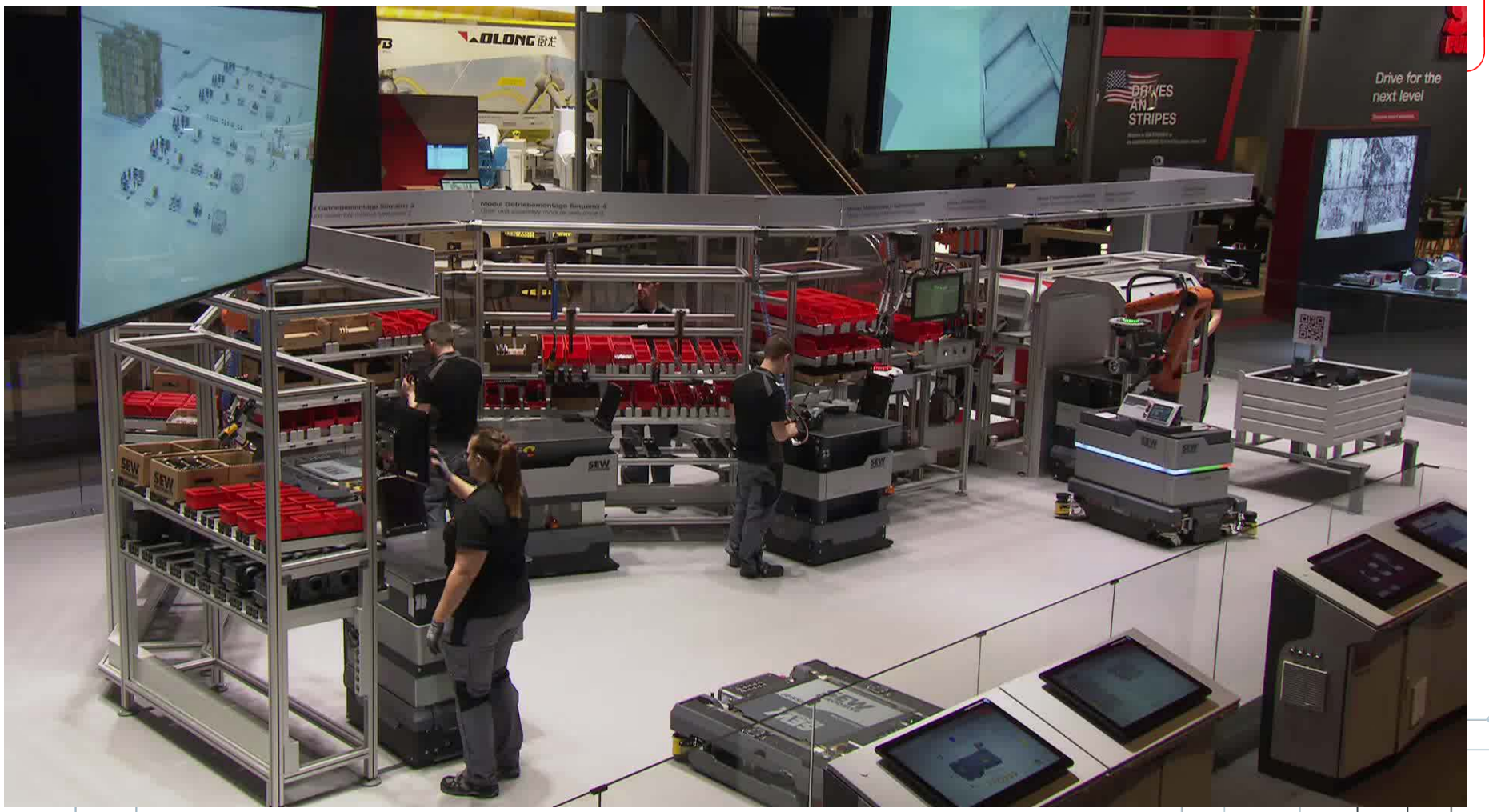
SEW Italia – Industry 4.0

Progetto nuovo layout del reparto assemblaggio in ottica Industry 4.0

Strategia

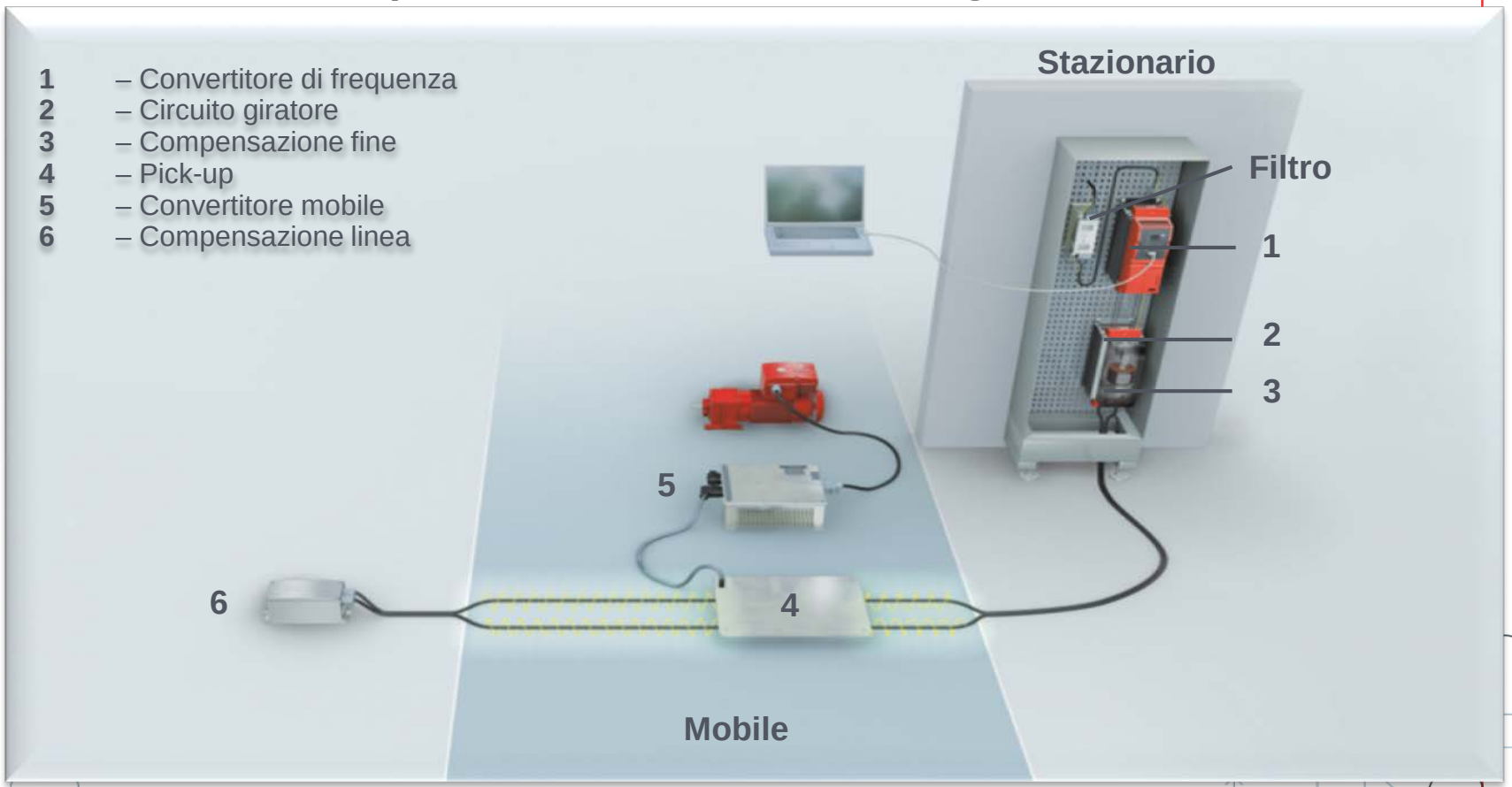
- Automatizzazione di attività a NON valore aggiunto (es. pressa automatica per il pre-assemblaggio dei motori / riempimento olio)
- Implementazione di 45 AGV connessi alla rete Wi-Fi
- L'AGV diventa il nuovo banco di lavoro
- Supermarket con tecnologia Pick-by-Light
- Flusso di processo digitalizzato (realtime), lo scambio di informazioni sarà gestito direttamente dagli AGV
- Implementazione entro Giugno 2018

Implementazione negli impianti di assemblaggio:
Sew Graben



Trasmissione dell‘energia sul veicolo AGV

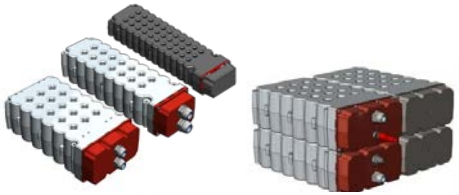
Sistema induttivo per la trasmissione dell’energia contactless:

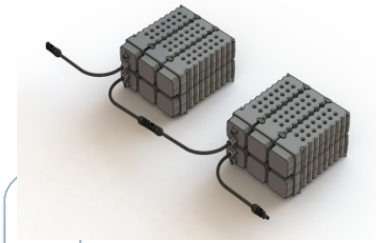


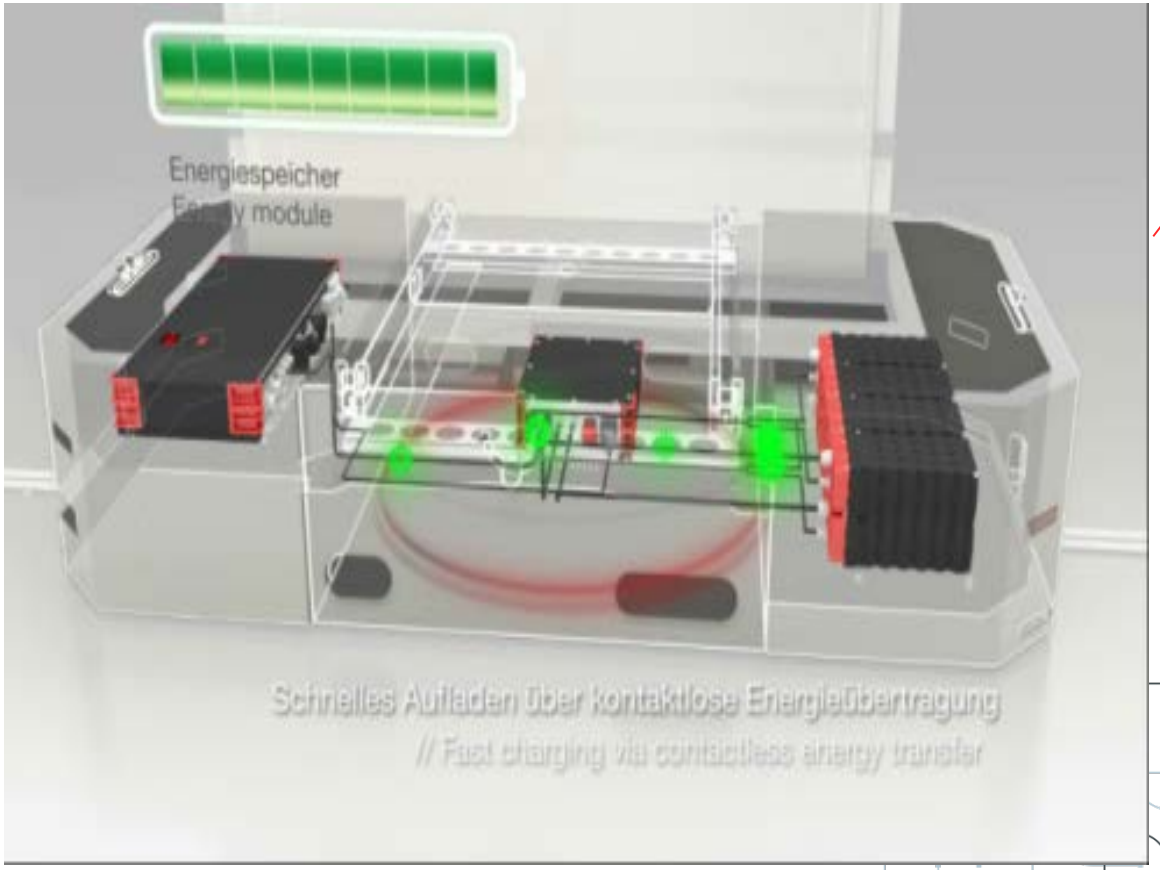
Energy Buffer

Elettronica di gestione S.C.

Super Capacitor

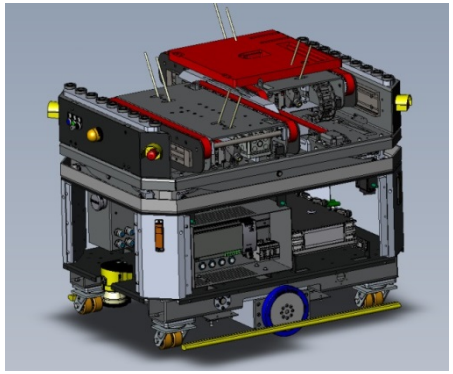


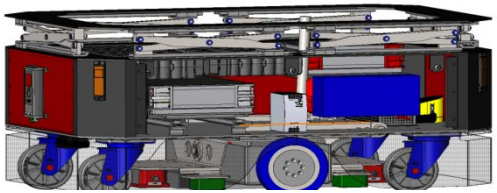


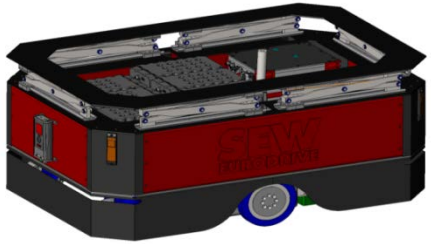


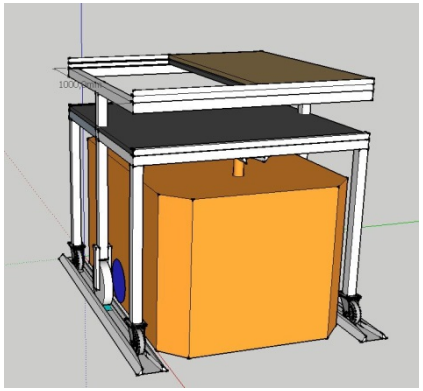
Trasporto mobile : AGV per la logistica

Il trasporto mobile



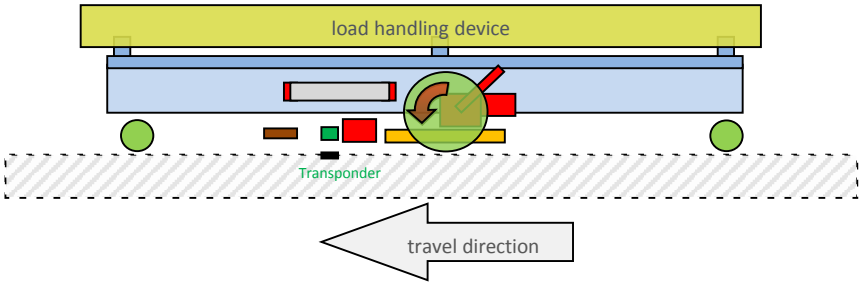


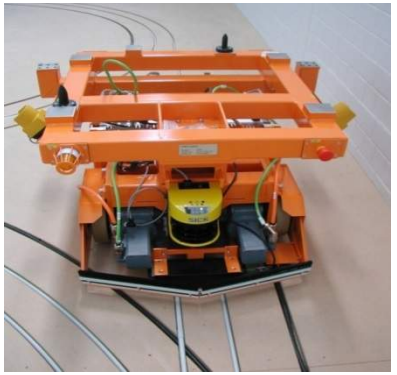


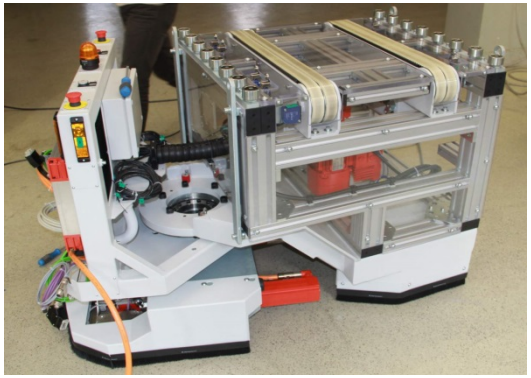


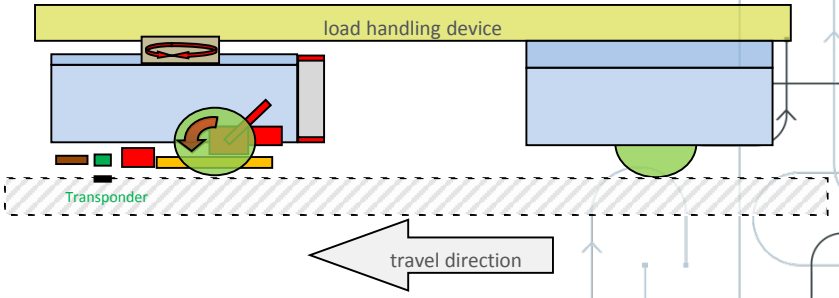
Caratteristiche meccaniche del veicolo AGV

La configurazione meccanica cambia al variare delle attività da svolgere

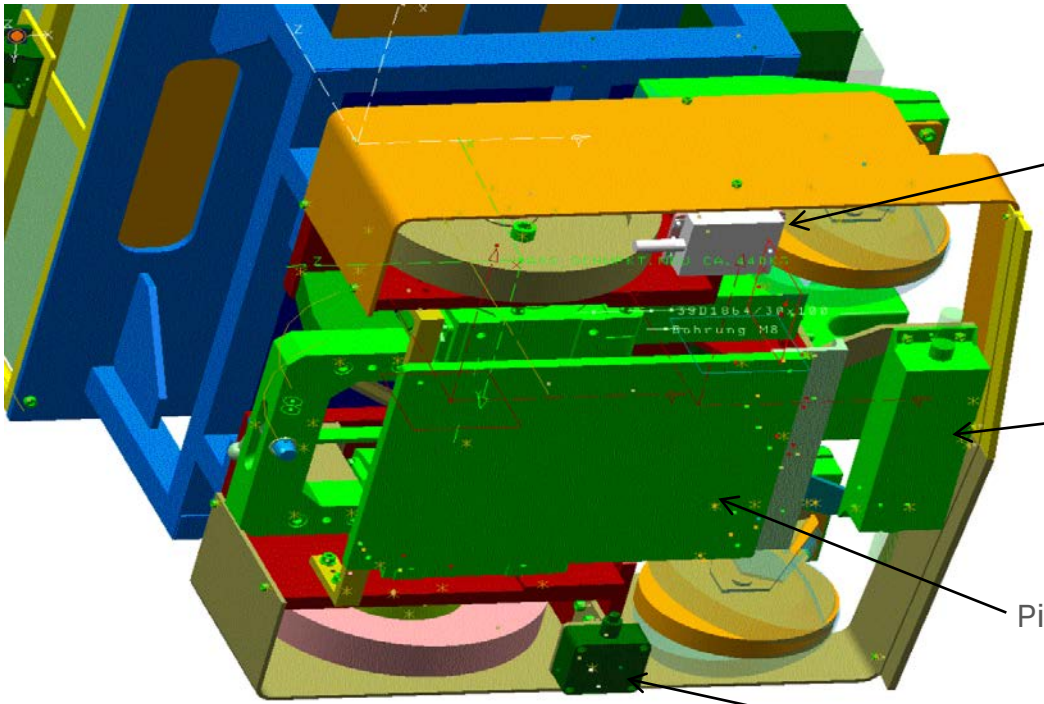






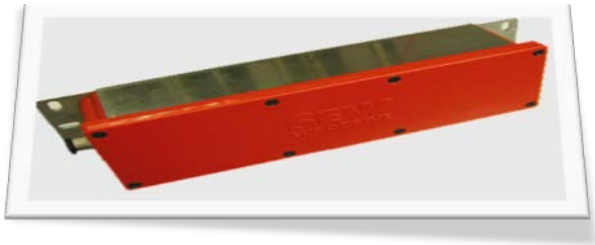


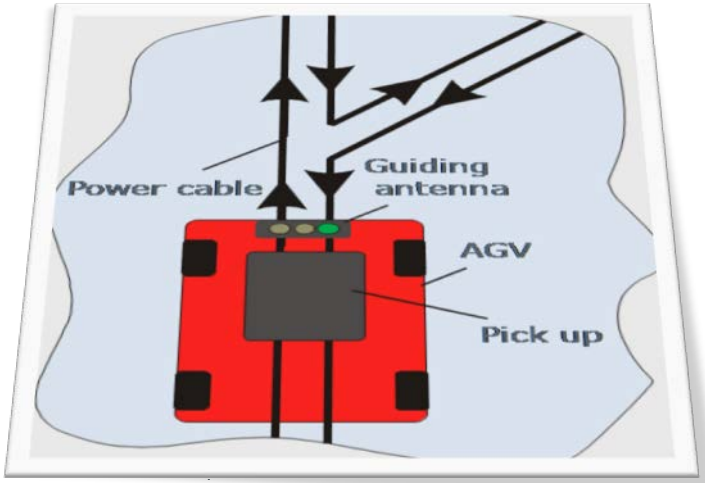
La struttura meccanica dell‘AGV



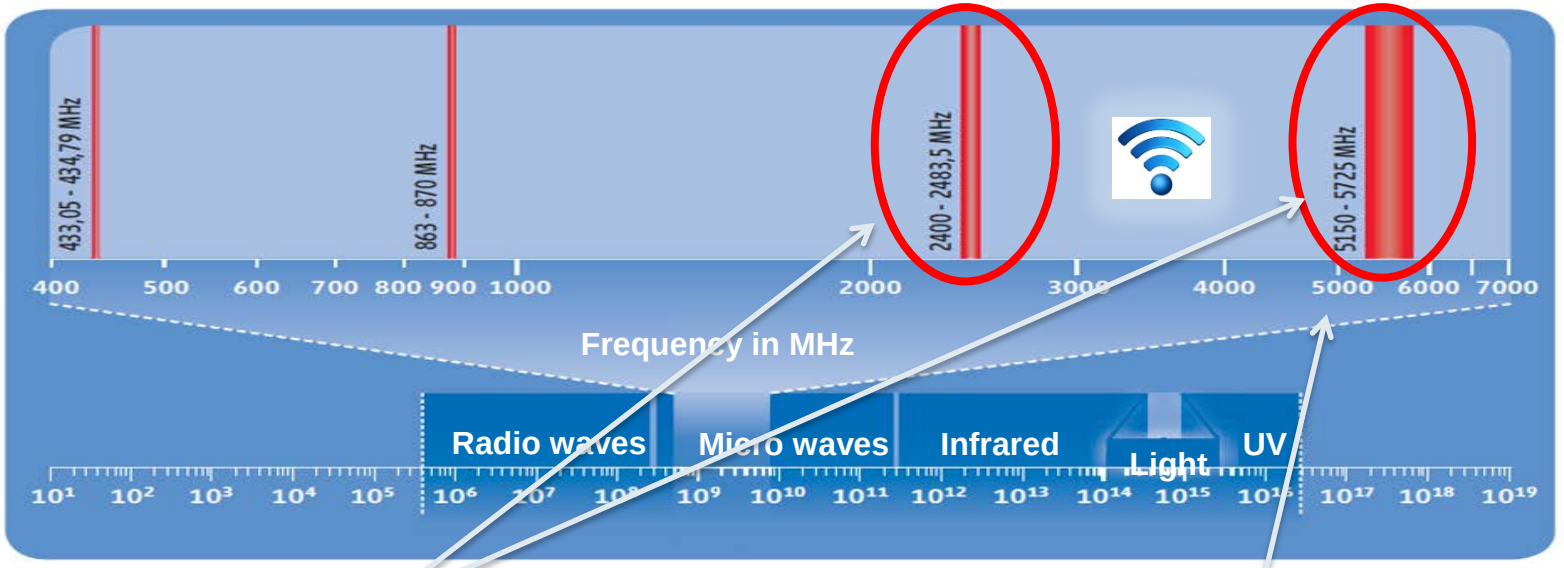
Sistema di guida ad induzione e ottico dell’AGV

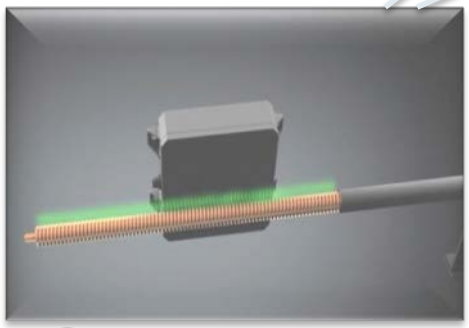
E’ possibile cambiare il sistema di navigazione da induttivo ad ottico





Comunicazione dati tramite Wi-Fi e/o cavo coassiale

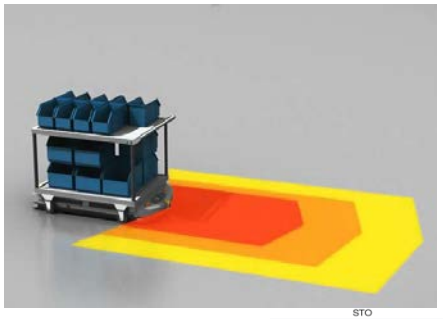


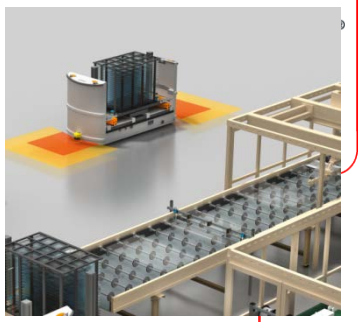


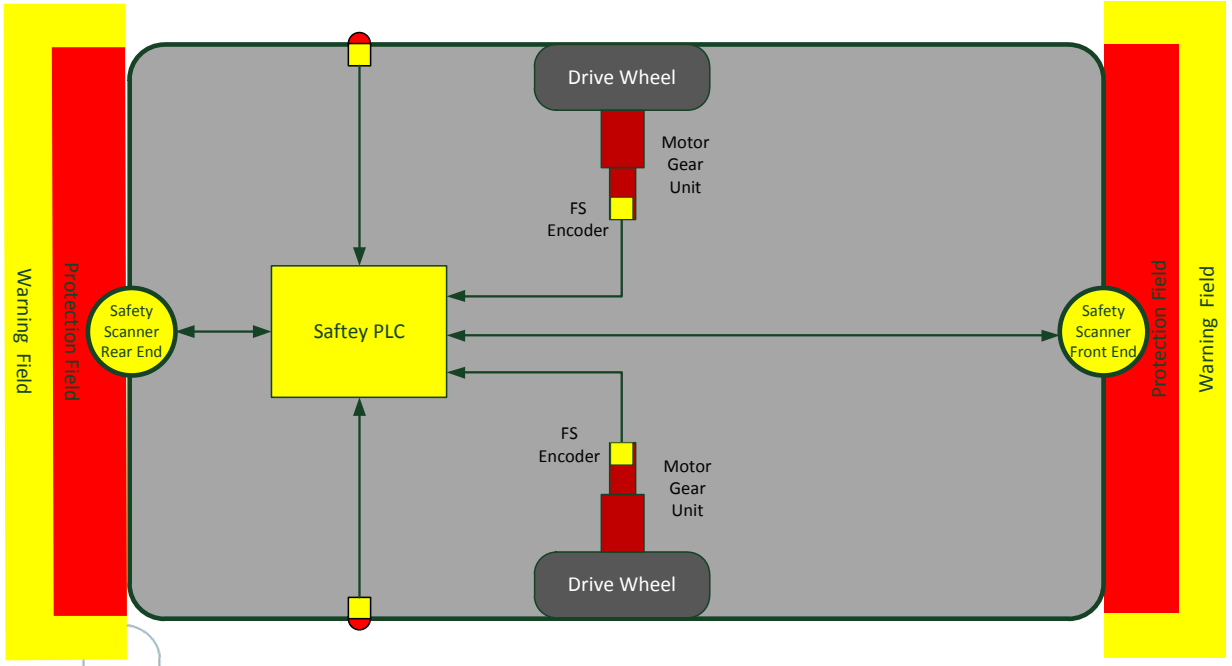
Leakage cable

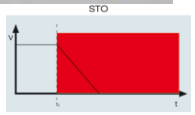
Wireless

Safety su AGV:
Funzioni di sicurezza avanzate

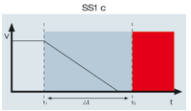




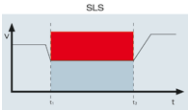




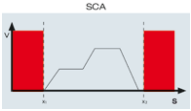
STO - Safe Torque OFF



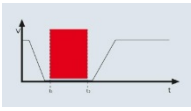
SS1c - Safe Stop according Category 1



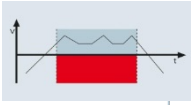
SLS – Safe Limit Speed Maximum Speed Control



SCA- Protection Field Switching



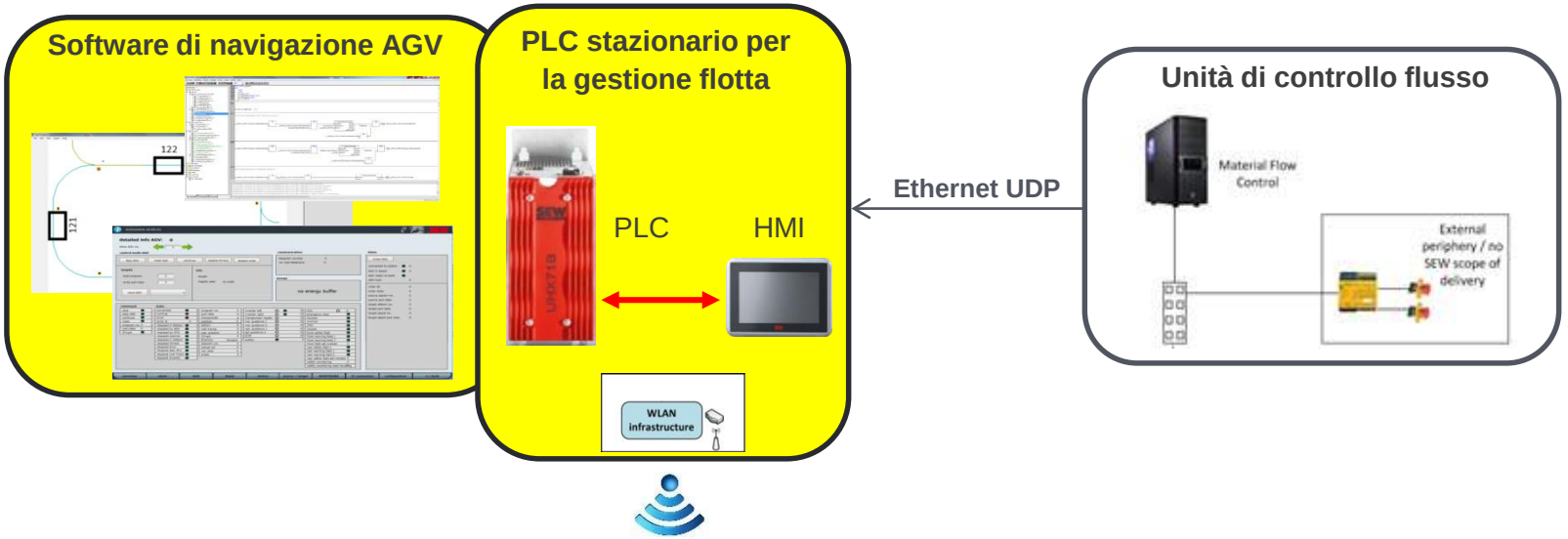
SOS – Safe Operation Speed



SDI- Safe Direction

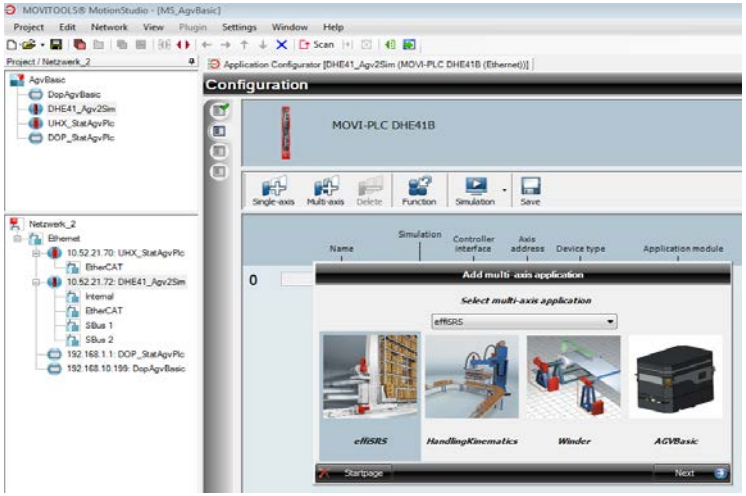
Architettura di insieme del sistema Hw e Sw:

Coordinamento della flotta tramite il Plc stazionario

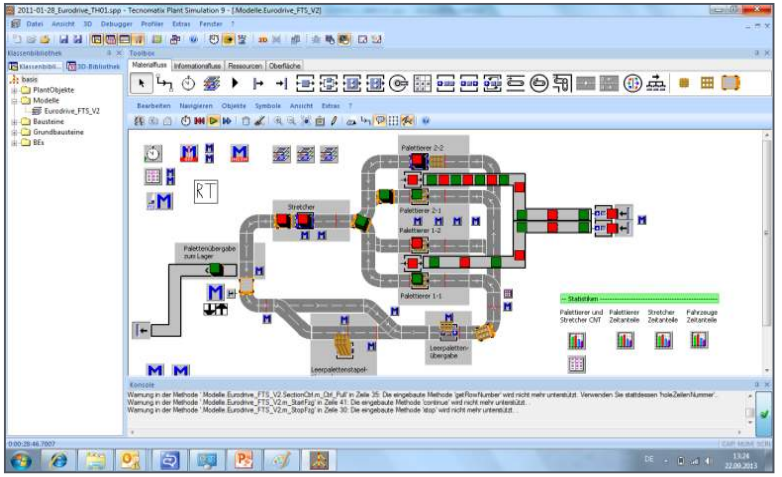


Modellazione, Simulazione ed Emulazione

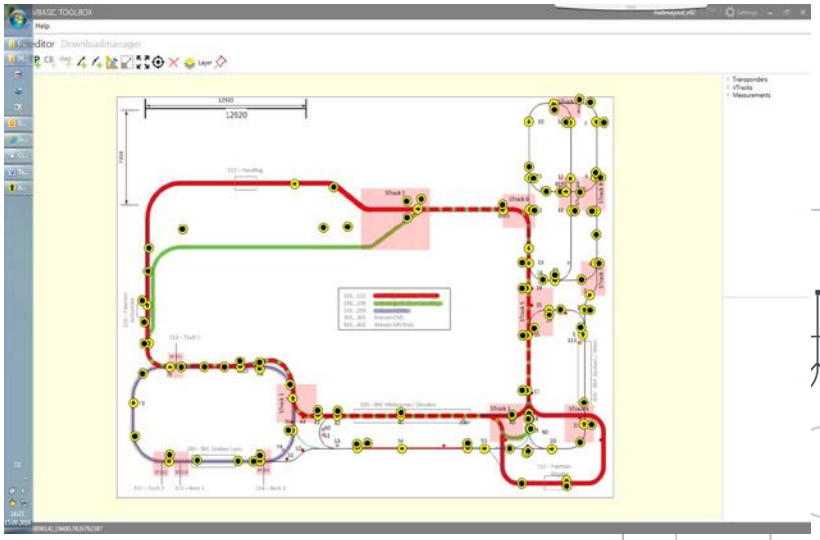
I software a disposizione



Motion Studio



Track designer



Emulatore di processo

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Grazie per l’attenzione!