

Future-proof Your Operations

combining the individual strengths of humans and robots

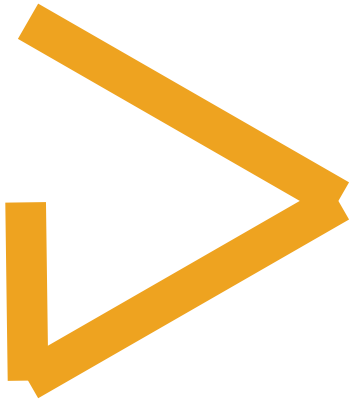
presented by
Daniel Theobald



Next week delivery became 2-day delivery
became same-day delivery...

rising expectations

“the Amazon effect”



customers want →

• which means →

more options

- more SKUS
- smaller orders
- nonconveyables

faster delivery

- higher throughput
- faster cycle times
- more locations

24/7 service

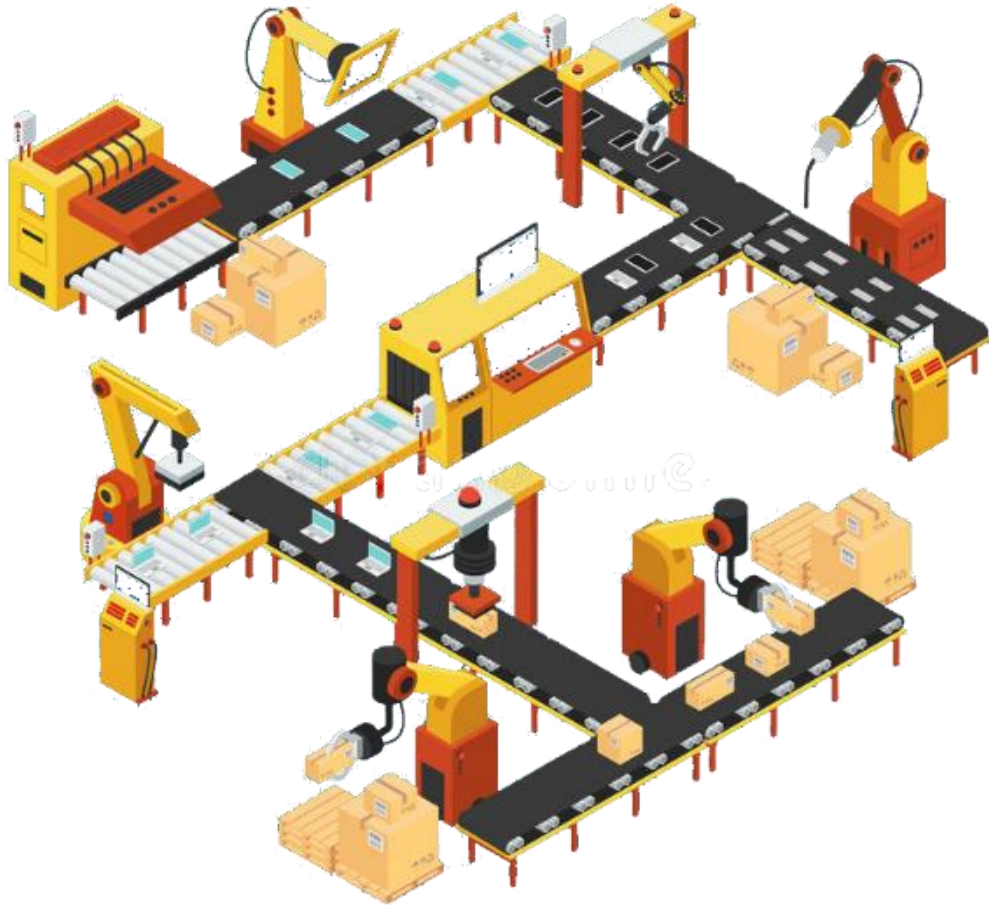
- realtime updates
- higher uptime
- more shifts

Top challenges facing the Materials Handling industry with regards to automation:

1. Hype is good for startups raising money, but bad for everyone else.
2. Safety, Safety, Safety.
3. Public perception, fear.
4. Lack of interoperability.


today's workflows

inflexible



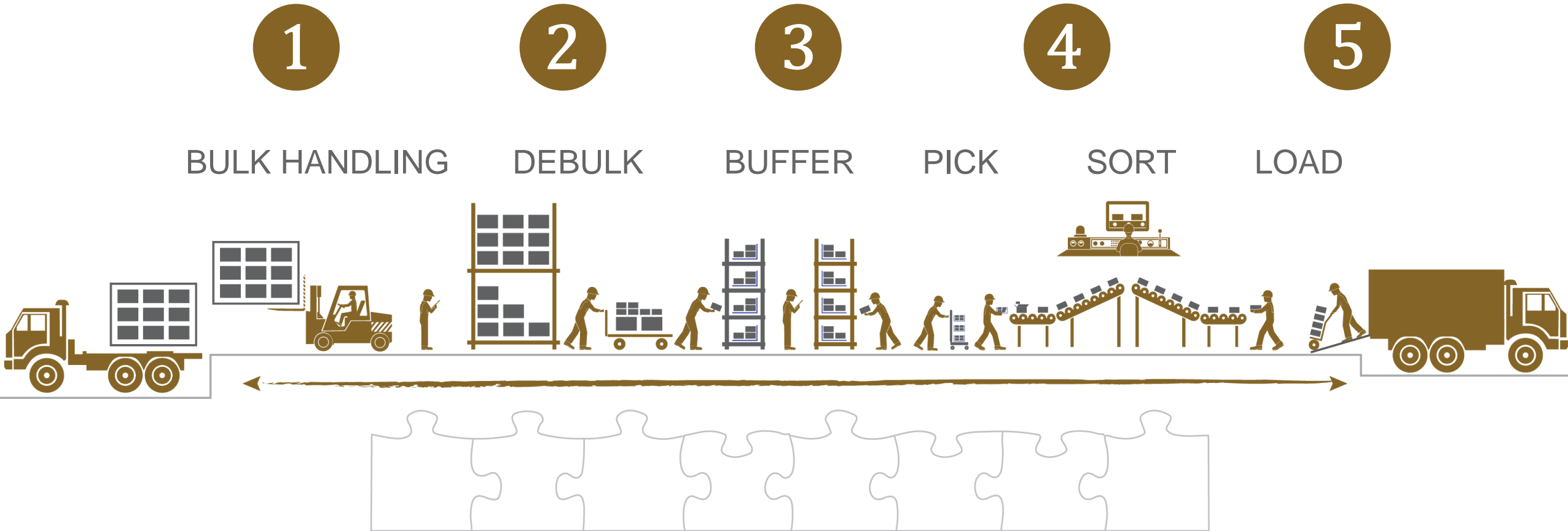
changes to workflow
or market demand
require re-engineering
and re-building

automating each process independently is
common practice... but it'll cost you



today's workflows

static, rigid, manually engineered



what if automated workflows could
adapt to ever-changing environments?



improved workflows

embrace flexibility



2x

productivity

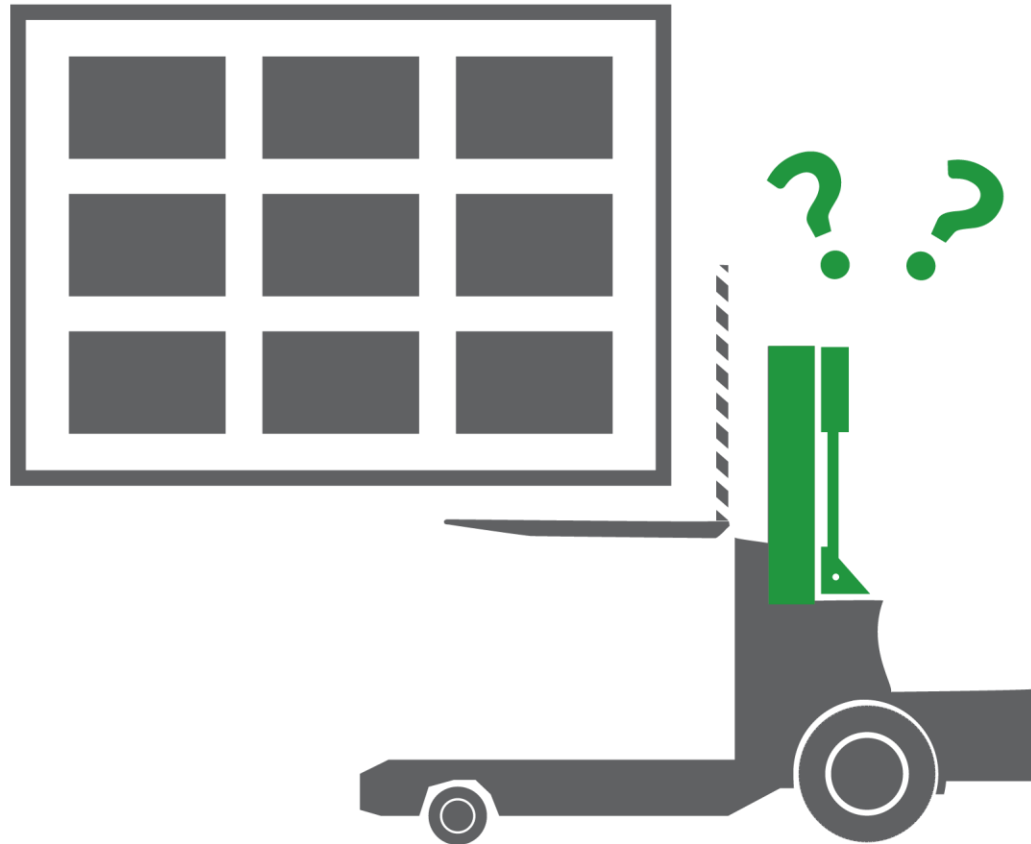


and decreasing non-value-added travel by

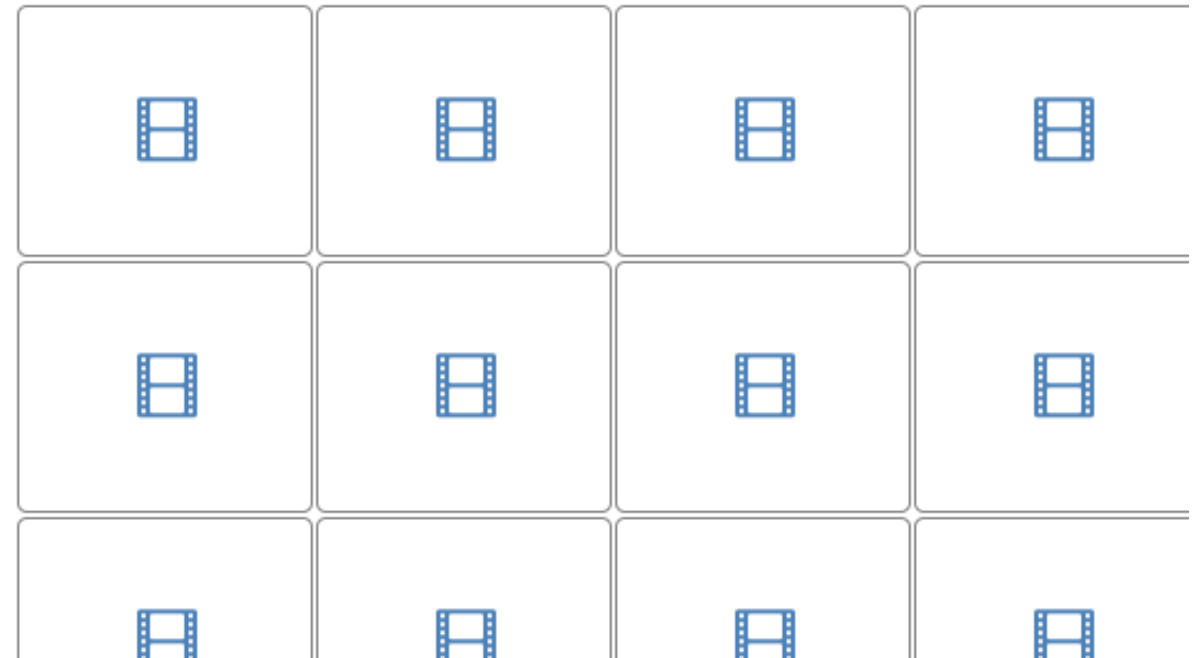
80%

improved workflows

embrace machine learning



robots that learn
and adapt *in realtime*



what happens when you try to remove
the human factor altogether?

“Yes, excessive automation at Tesla was a
mistake. To be precise, my mistake.

Humans are underrated.”

- Elon Musk

improved workflows

embrace orchestration



orchestrate & optimize
evolving mix of diverse
robots and humans that
execute workflow

a hybrid model for physical work

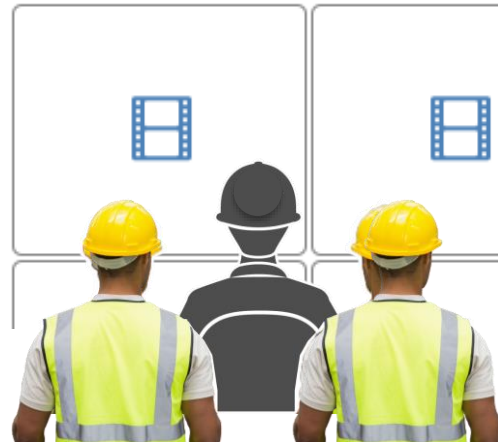
the human factor

{ abstract reasoning
emotional intelligence
strategic creativity }

+

{ precision
efficiency
data collection }

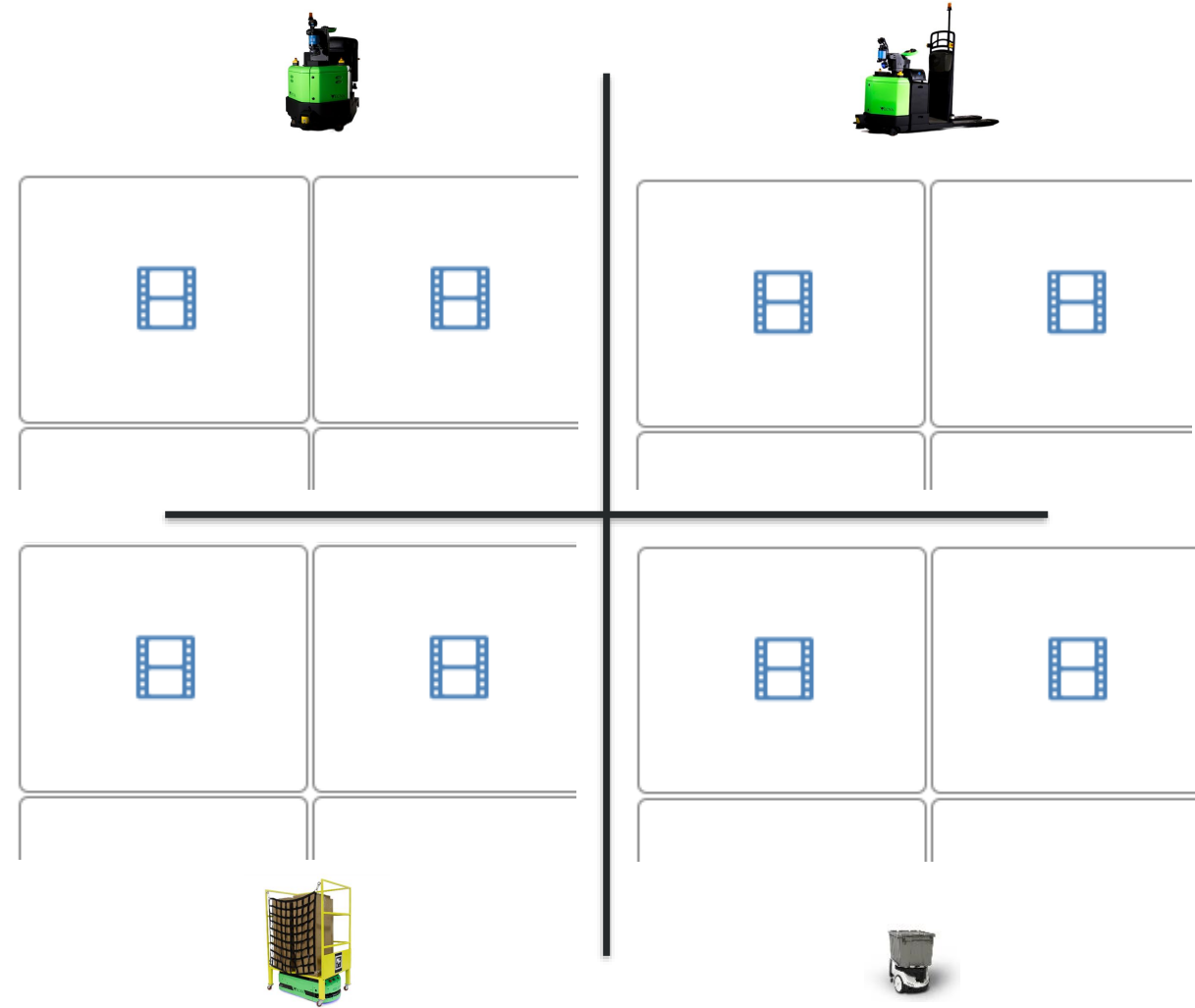
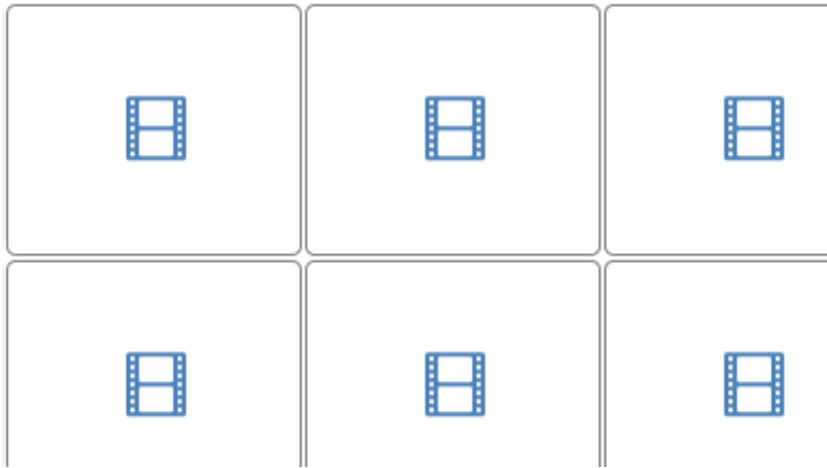
the robot factor



= an adaptable future

optimized workflows

combine the individual strengths of humans and robots



one size does not fit all

embrace interoperability

when you have a wide range of robots



interoperability is key

one size does not fit all

embrace standards

working with a wide
range of robots

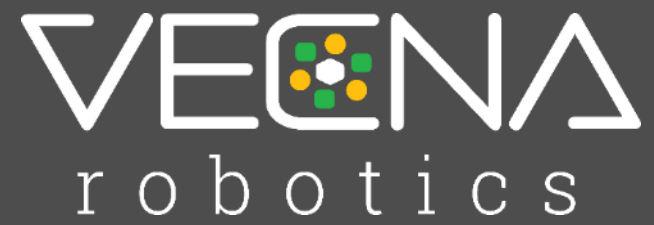


to establish standards
of interoperability



5 key ways to future-proof your materials handling operations:

1. Flexible, adaptable fleets of a variety of autonomous equipment.
2. Crawl, Walk, Run.
3. Empower workers with information.
4. Orchestrate.
5. Interoperability.



Further inquiries, please contact our team

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