

# Optimize your tooling investment

Regional Meeting • Cincinnati, Ohio



ASSOCIATION OF ROTATIONAL MOLDERS

The Avantech logo, featuring a blue stylized 'A' icon to the left of the word 'avantech' in a lowercase, sans-serif font.

Tom Innis – VP Sales & Marketing



# OPTIMIZE

op-tuh-mahyz

Verb:

1. to make as effective, perfect, or useful as possible.
2. to make the best of.

# OPTIMIZE

what do we mean relative to tooling?

- ▶ Consistent part production that meets quality requirements.
- ▶ Safe & efficient tooling operation in the rotomolding environment.
- ▶ Durability of tooling which minimizes maintenance and repair costs.
- ▶ Maximum return-on-investment for tooling expenditure.

In spite of our best intentions...

You built my tool wrong!



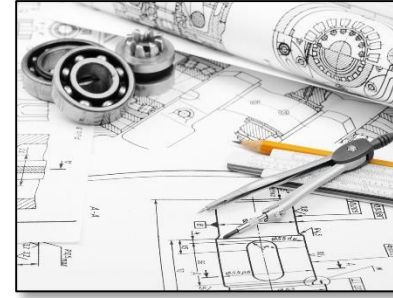
Tool-builder involvement at the earliest stage of design development invariably improves project outcomes:

- ▶ Cost reduction.
- ▶ Speed-to-market.
- ▶ High quality parts from onset of production.
- ▶ Safe & efficient operation.
- ▶ Effective supply chain management.

**TYPICAL MOLDER » TOOLBUILDER COMMUNICATION:**







Tool-builders tend to be far-removed from product development and design.

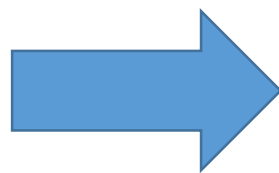
“Your suggestions for part design revisions proved invaluable: we lowered tool cost, received them (tools) quicker than anticipated, and ran good parts from the first cycle.”

(actual rotomolder comments!)

The look of a satisfied customer!







# Identifying cost drivers = tool optimization

- Design input from tool-builder:
  - Tool type (fabricated, cast aluminum, CNC machined, etc.)
  - Parting line location & configuration
  - Number of tool pieces
  - Part texture requirements
  - Graphics location
  - Fill ports
  - Slide mechanisms
  - Through-cores
  - Safe, efficient part removal

“Working cohesively with the molder and end-customer during the design phase is critical in driving project success. It always pays off for all parties.”



- Vince Costello,  
Diversified Mold & Castings



Use the right tool for the job, or you could be screwed.

**Right tools. Right solutions. Right now.**

At Avantech, our diverse tool manufacturing capabilities — cast aluminum, CNC-machined, and custom fabrication — help rotomolders choose solutions that will drive successful project outcomes. With a team focused on what you need, we'll provide the right tool for the job, and our first-time quality, on-time delivery will ensure you won't get screwed in the process.



avantech.com | (218) 828-0110

Not all ad concepts make it to print.

(but you get the idea)

PURE  
**ICE**

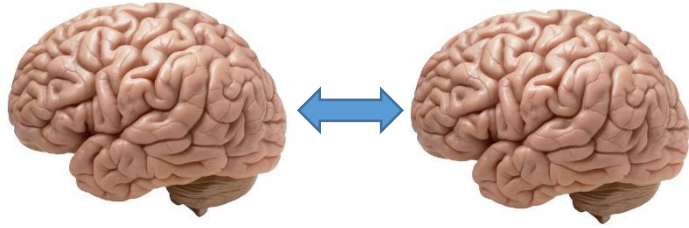
**I C E**

**BUY INLAND ICE**



We engaged in a mind-meld with  
customer & customer's customer...





- Finish & texture requirements
- Dimensional tolerance
- Machine type & size
- Material fill and dispersion
- Part removal
- Stay in-cycle
- Safety concerns
- Wear and tear of tooling

Machine operators &  
manufacturing  
personnel provided input  
on all of these issues!



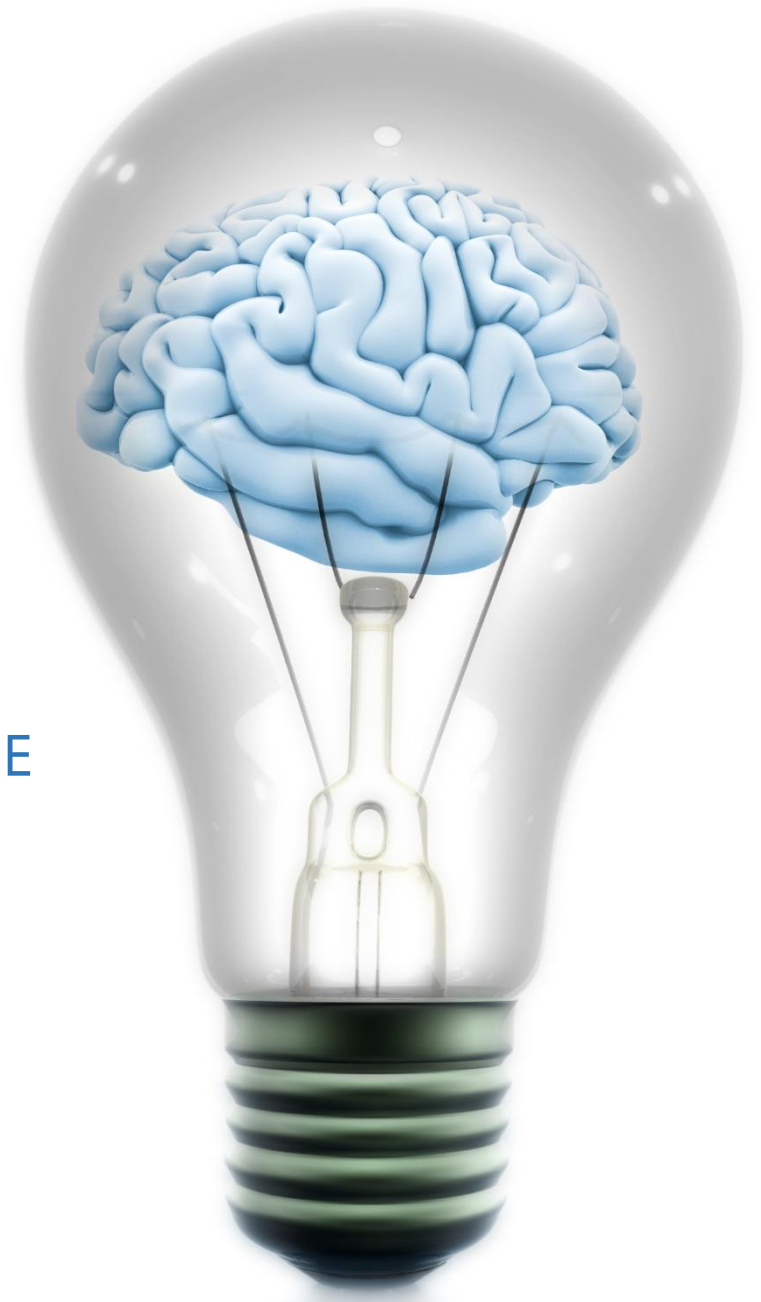
A large, complex industrial mold assembly is being lifted by a crane in a dimly lit factory. The mold is made of metal and has several rectangular cavities. Two men are standing next to it, looking up at the assembly. One man is wearing a dark blue shirt and the other is wearing a light blue shirt. The background shows various industrial equipment and tools.

...we built this  
tool.  
It's a big tool.





COLLABORATION  
OPTIMIZATION ZONE



“I view my Craftsman® tools as my go-to to ensure project success: you know it’s going to work when you grab it. The same thing with rotomolds – think of them as a key investment to driving success in your rotomolding project.”



- Erik Adams, Norstar



Once your tools have arrived...

# Incoming Quality Inspection

- Check all threaded fittings to make sure there is no binding.
- Check mounting plate for strength, size, mounting hole locations, etc.
- Inspect internal walls of tool cavity for correct surface finish, porosity, contamination, etc.
- Clean tool cavity prior to charging for first prototype run.
- Inspect parting lines.
- Check for proper location and adjustment of air amplifiers, core pins, loose pieces, fill ports, etc. Continuous re-adjustment will be necessary during tool life.
- Check tool and frame dimension to confirm clearance in the oven.

# Incoming Quality Inspection

- Check proper vent location and size. Ensure vent tubes and any packing material are placed in tool prior to production.
- Ensure that clamp type and location is per-spec. Confirm proper closure operation of clamping system.
- If bolt-receivers are used, confirm correct location, adjustment and operation.

Other post-arrival  
ways to optimize  
tooling investment

**THANKS CAPTAIN**  
**OBVIOUS**



This is your brain.



Any questions?

This is your brain on  
drugs.







+



+



+



AXEL

“Cleaning your parting lines are like flossing your teeth:  
you only need to floss the teeth you want to keep.”



- Chris DiFilippo, Al Cast Mold & Pattern









So what if we drop metal scrapers in the tool?

It can be a crazy thing, this "cause & effect" stuff.

...it's not like it causes blemished parts.

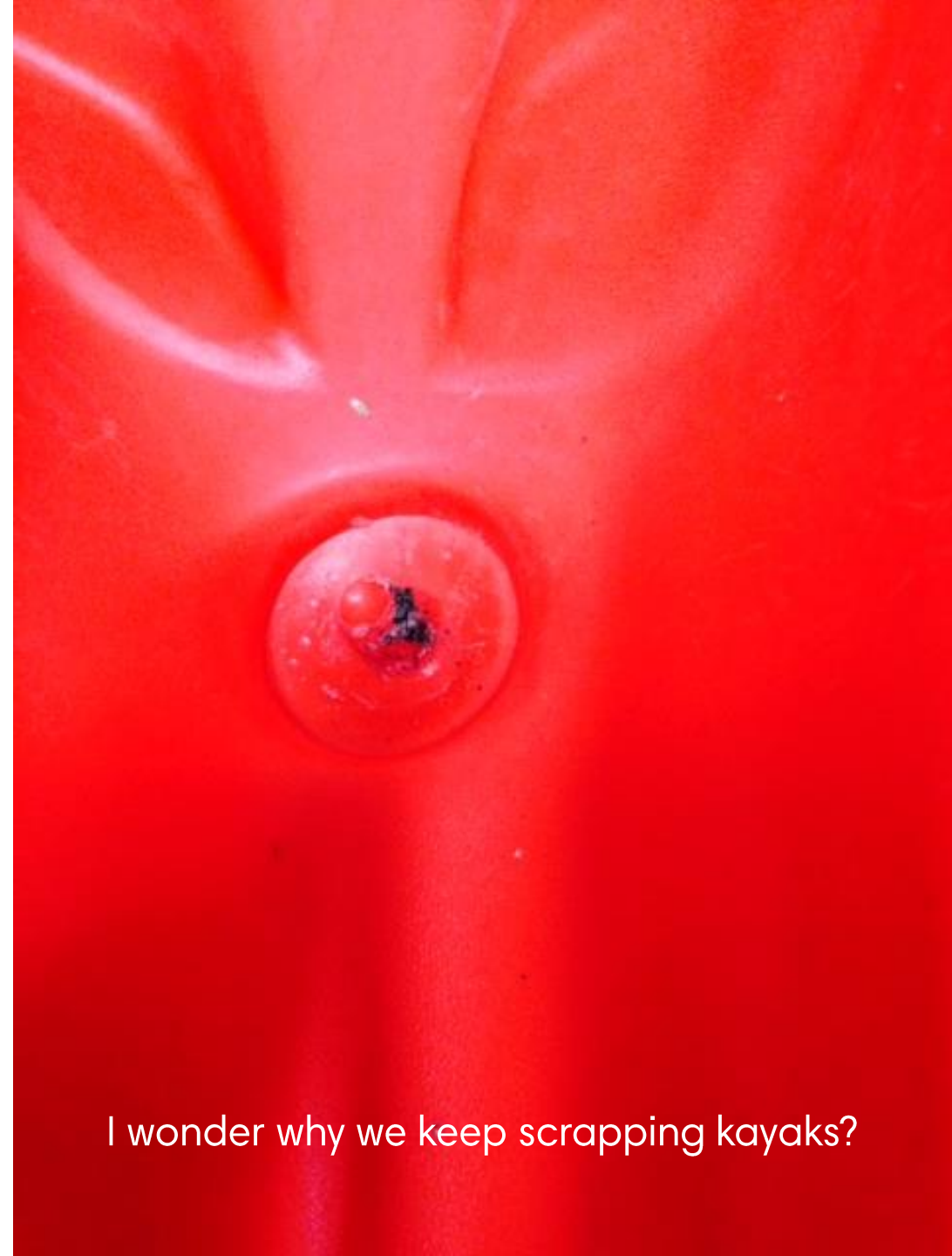




We beat out of the s\*\*\* out of our scuppers to  
make sure the tool closes.



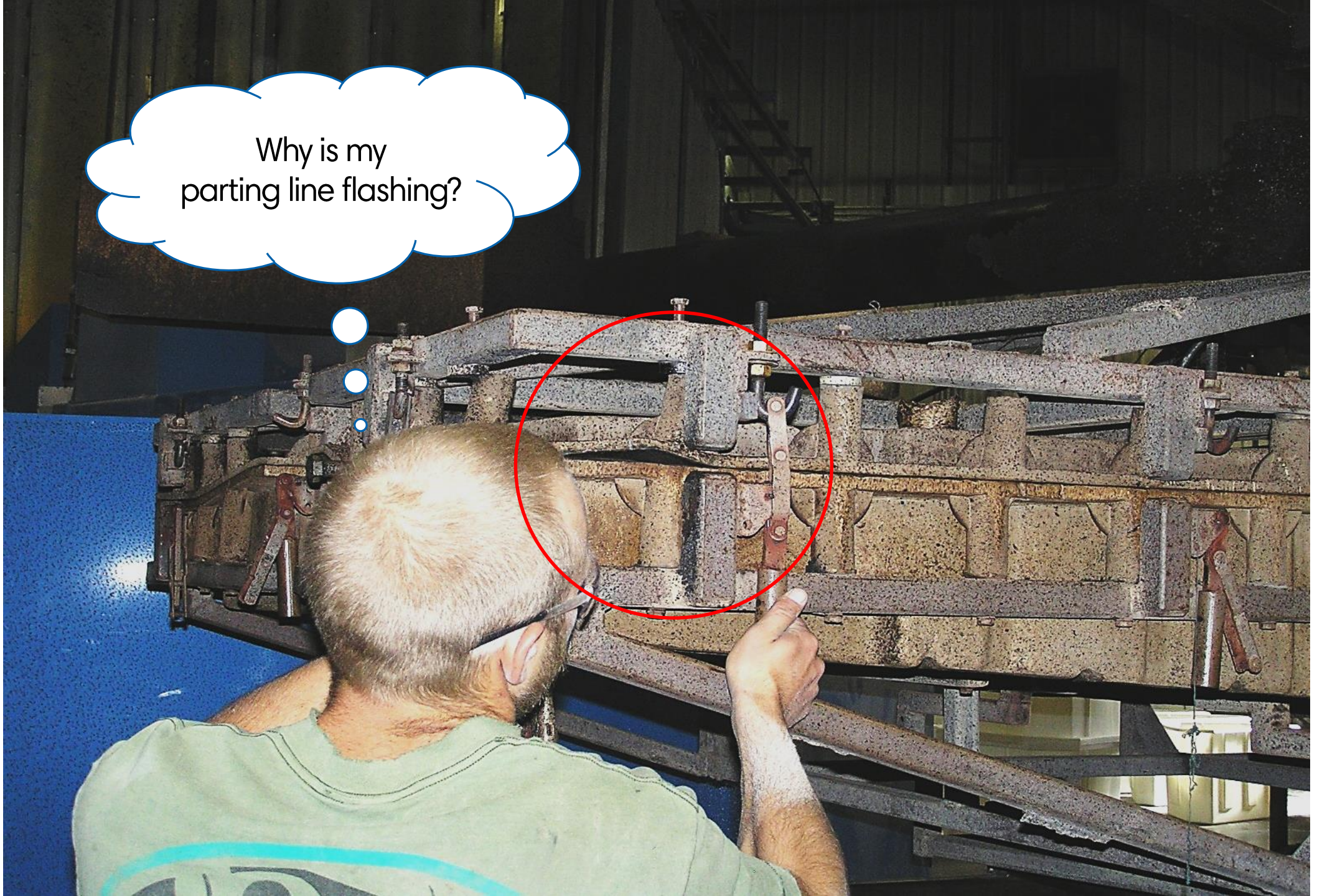
It can be a  
crazy thing,  
this “cause &  
effect” stuff.



I wonder why we keep scrapping kayaks?



Why is my  
parting line flashing?





# Summary

- Shorten the chain.
- Grab your favorite tool.
- Mr. Spock was onto something.
- Don't do drugs.
- Remember to floss your teeth.
- Thank you!



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