

The picture of productivity...



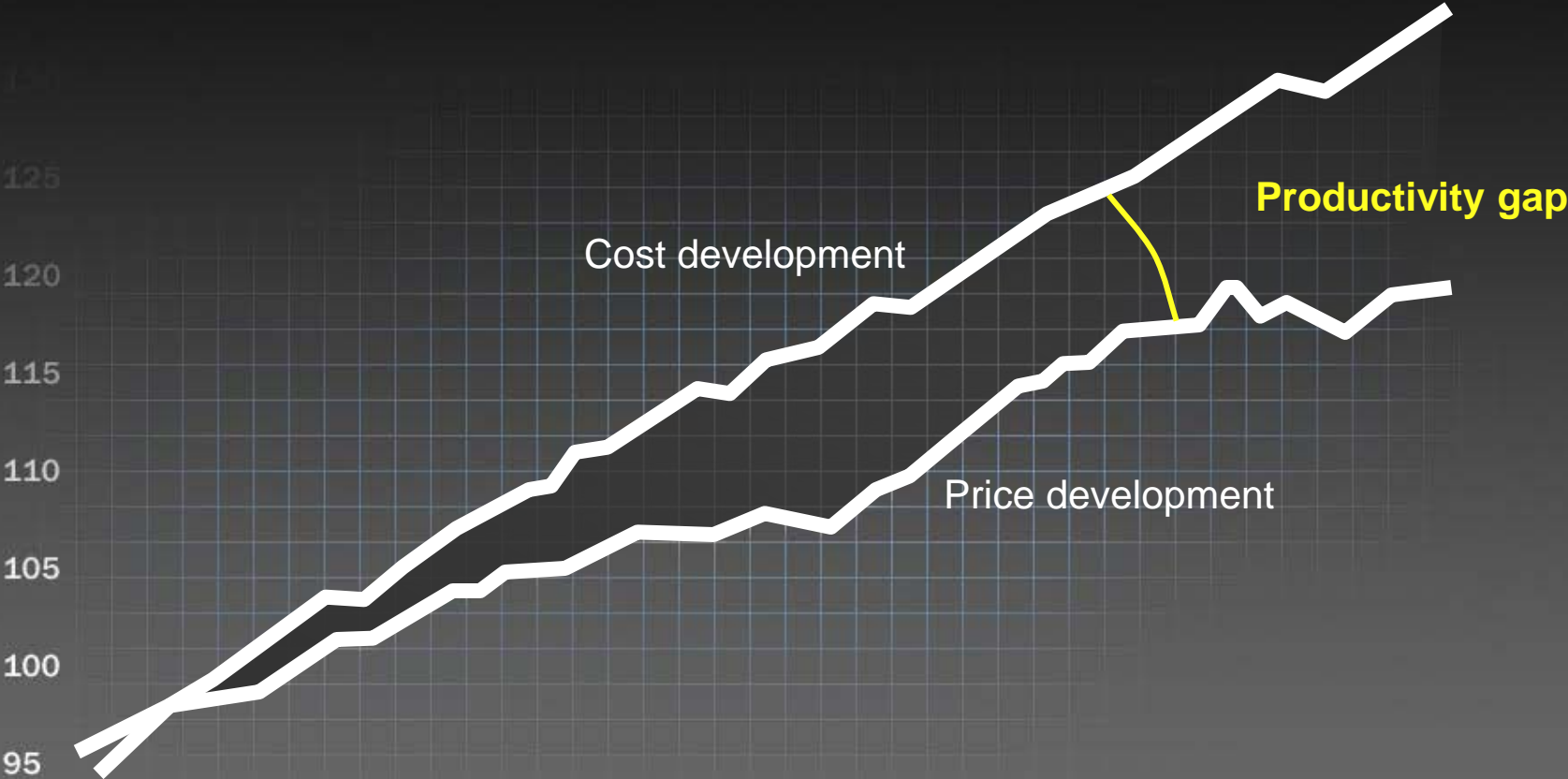
...the art of saving money





The
Modern Art of Milling

Closing the productivity gap



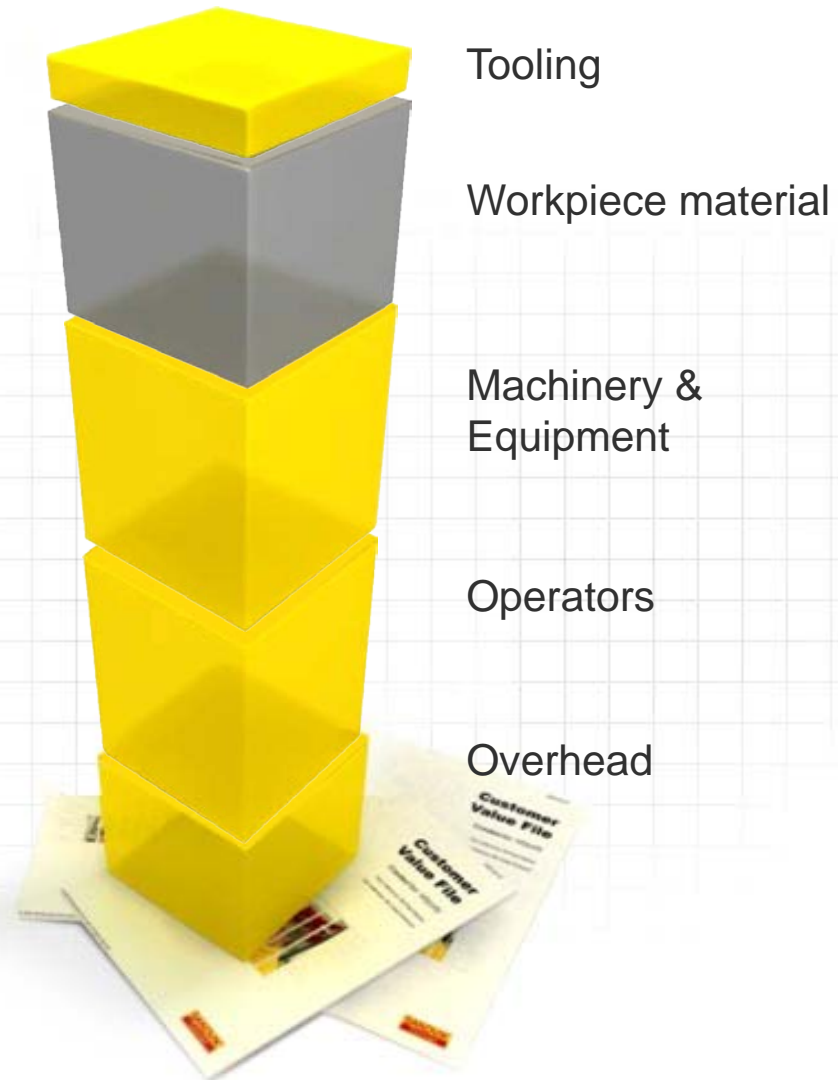
Source: Mechanical Industry in OECD

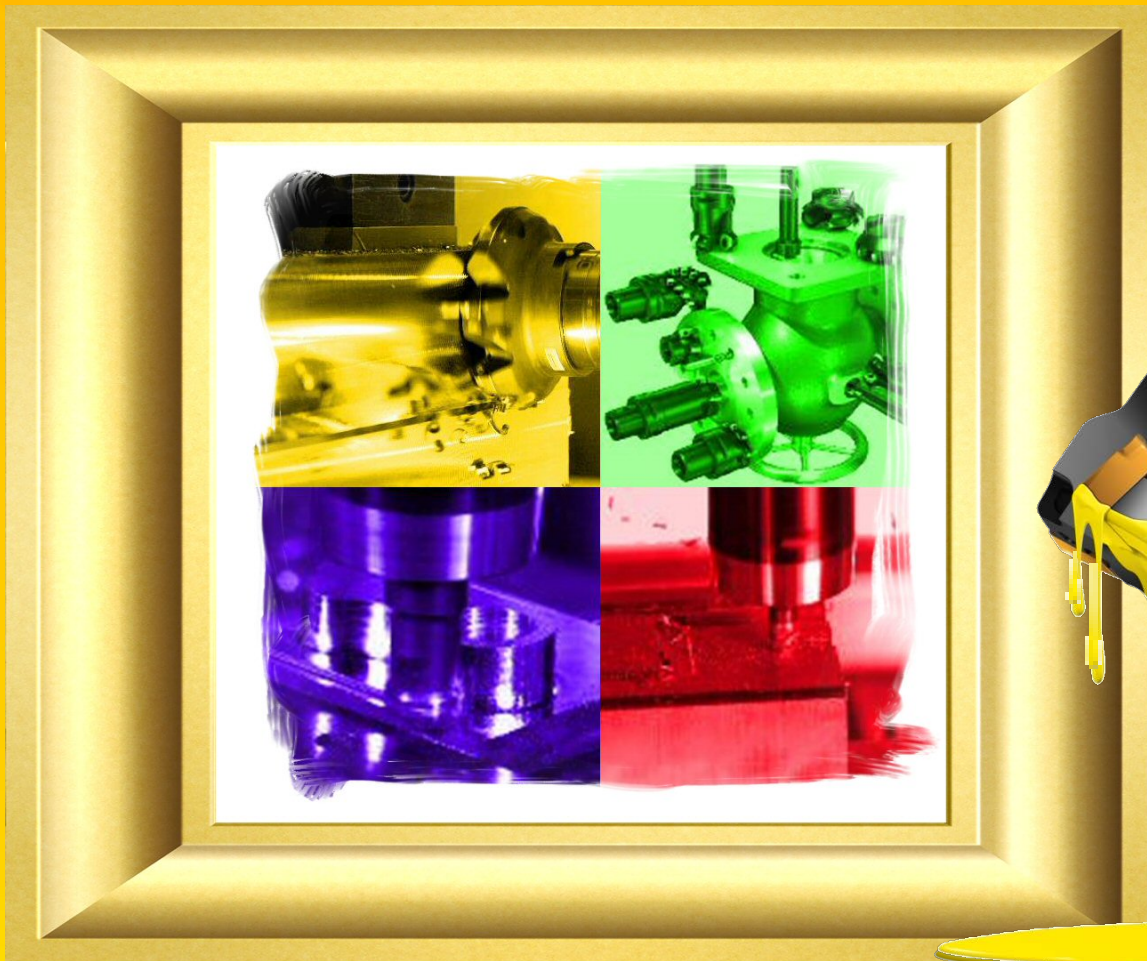


Manufacturing economics

Variable costs

Fixed costs





Sandvik Coromant's Modern Art of Milling

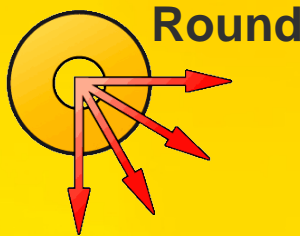
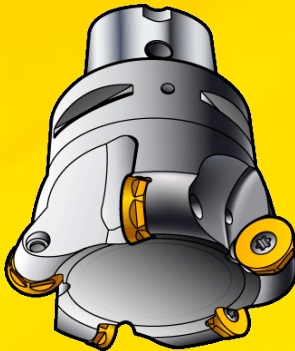
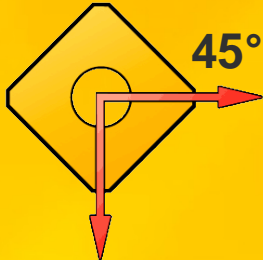
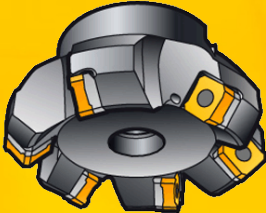
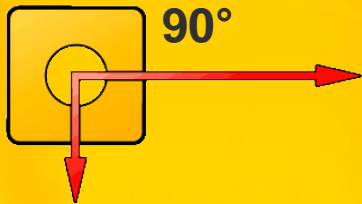
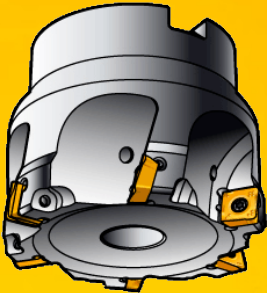




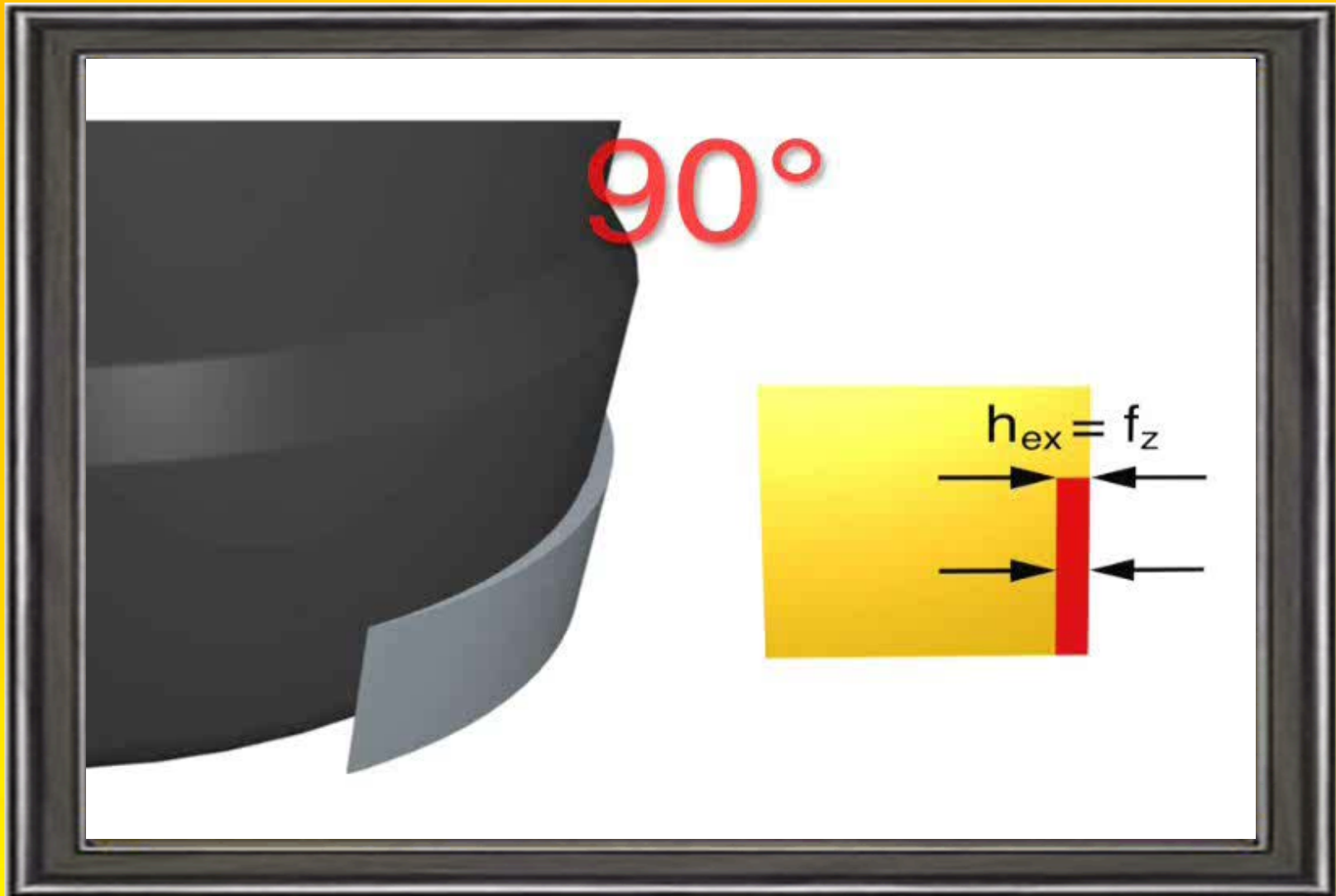
Choose the right tools



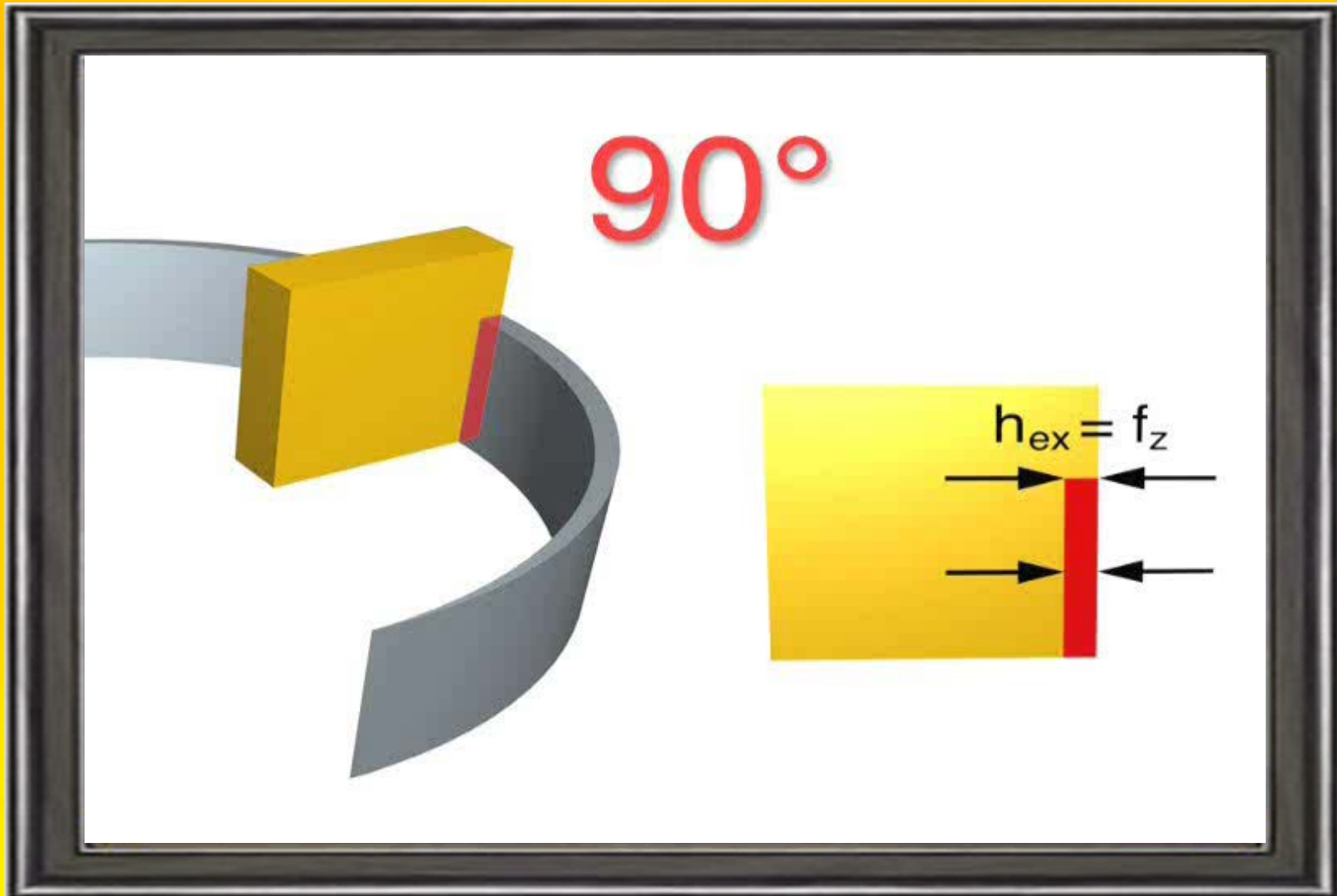
Choose the most productive and cost efficient tool



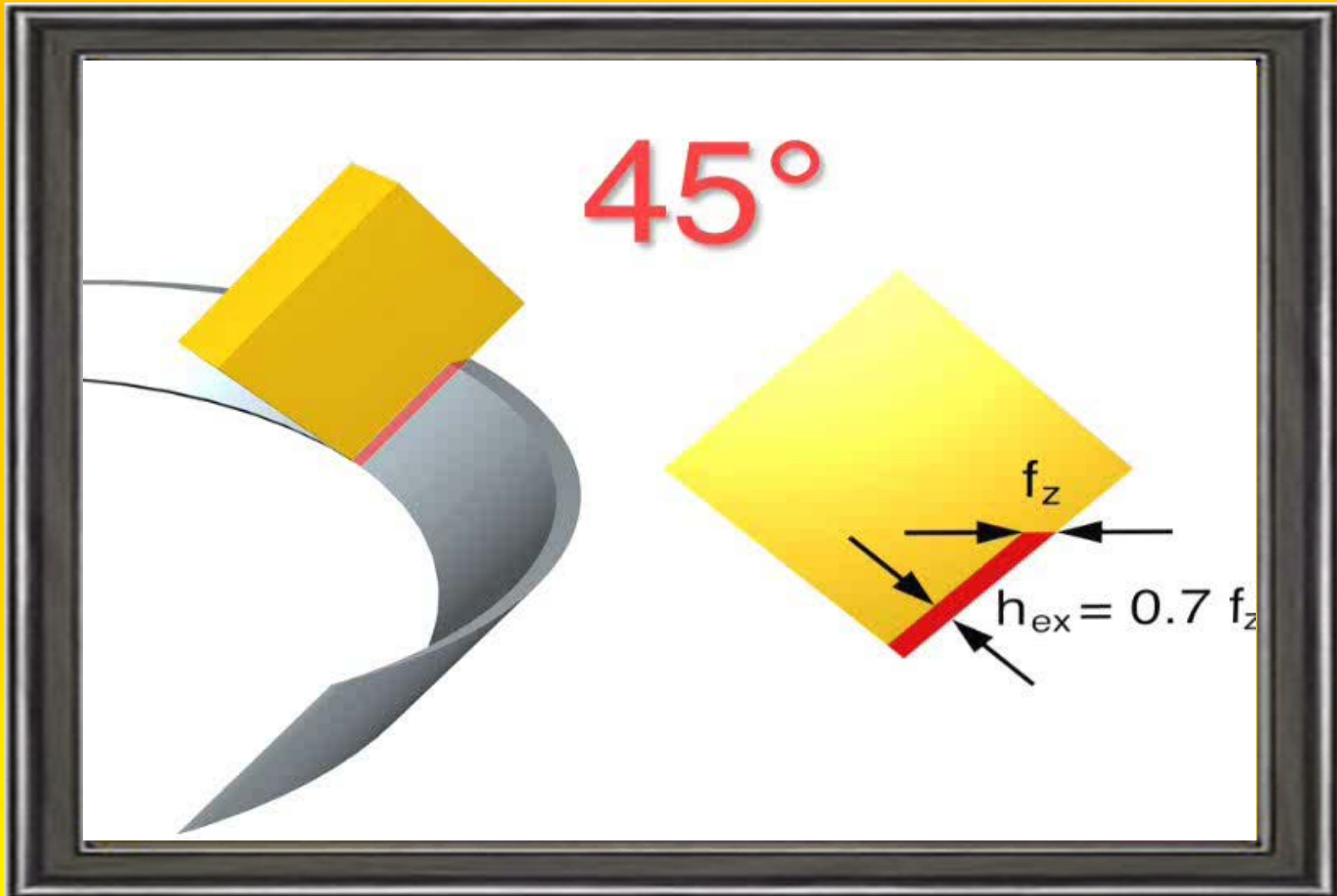
The right tool wins the race



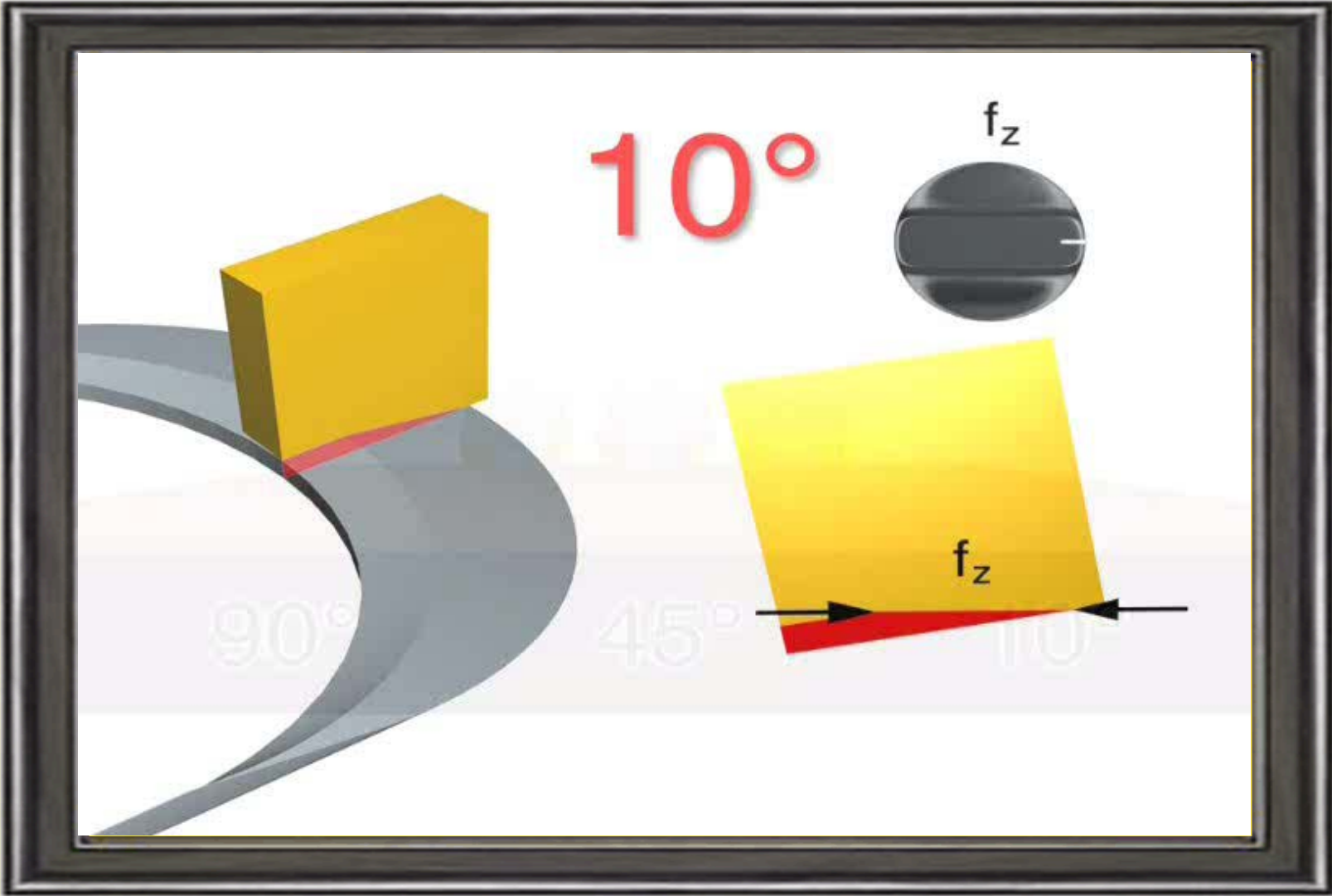
The right tool wins the race



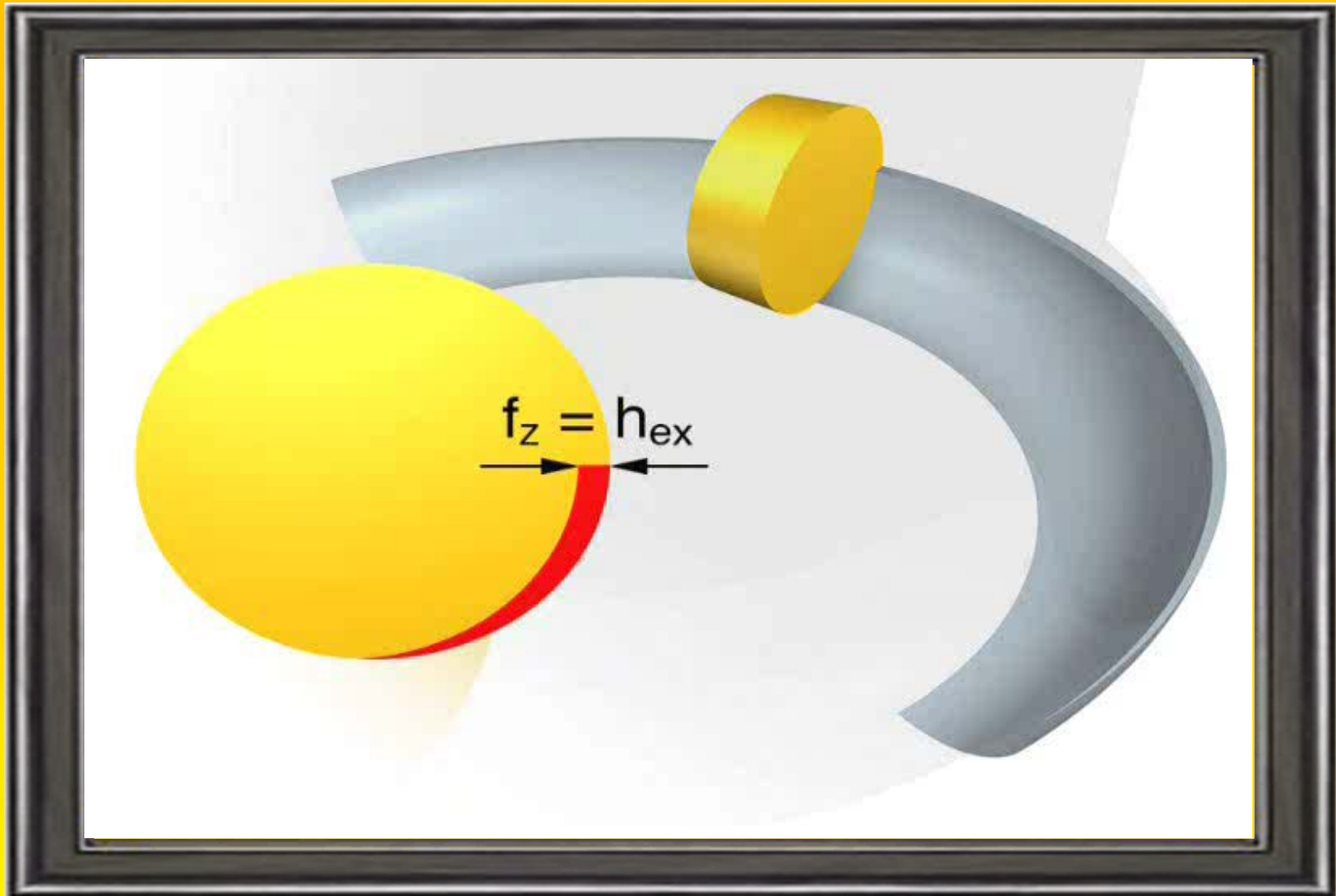
The right tool wins the race



The right tool wins the race



The right tool wins the race



Pick the right tool based on . . .

The machine tool

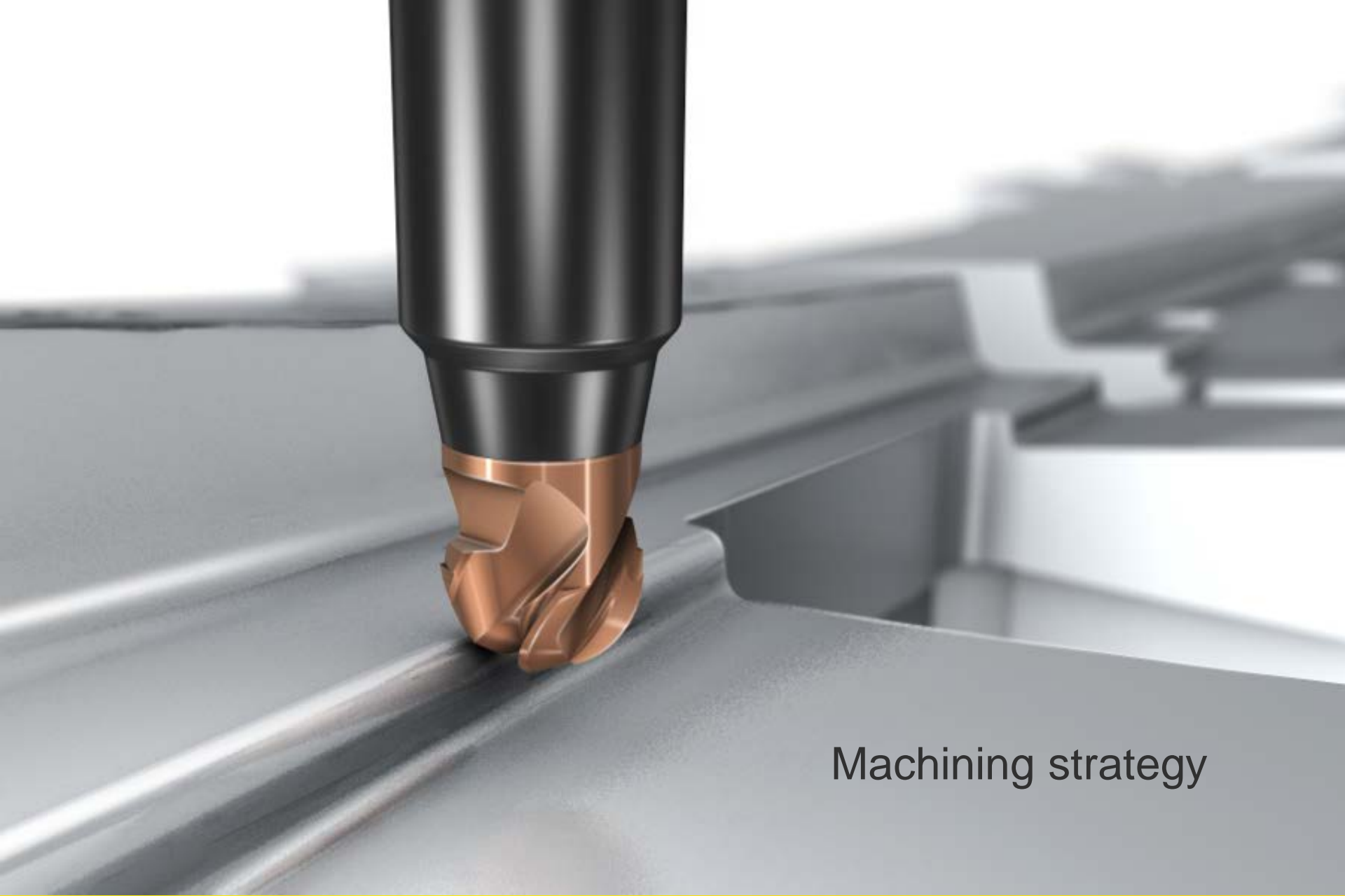
The component features

Number of parts being machined

The material

Maximum metal removal rate





Machining strategy





The Golden Rule:
Thick to thin chip

ould ensure the
ckness
exiting a cut

What is wrong with this picture . . .

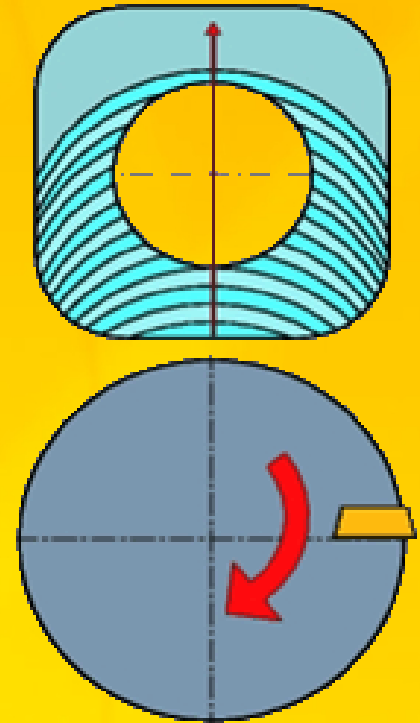
Thick chip on exit

Cutter doesn't have constant contact with the part going over the boss

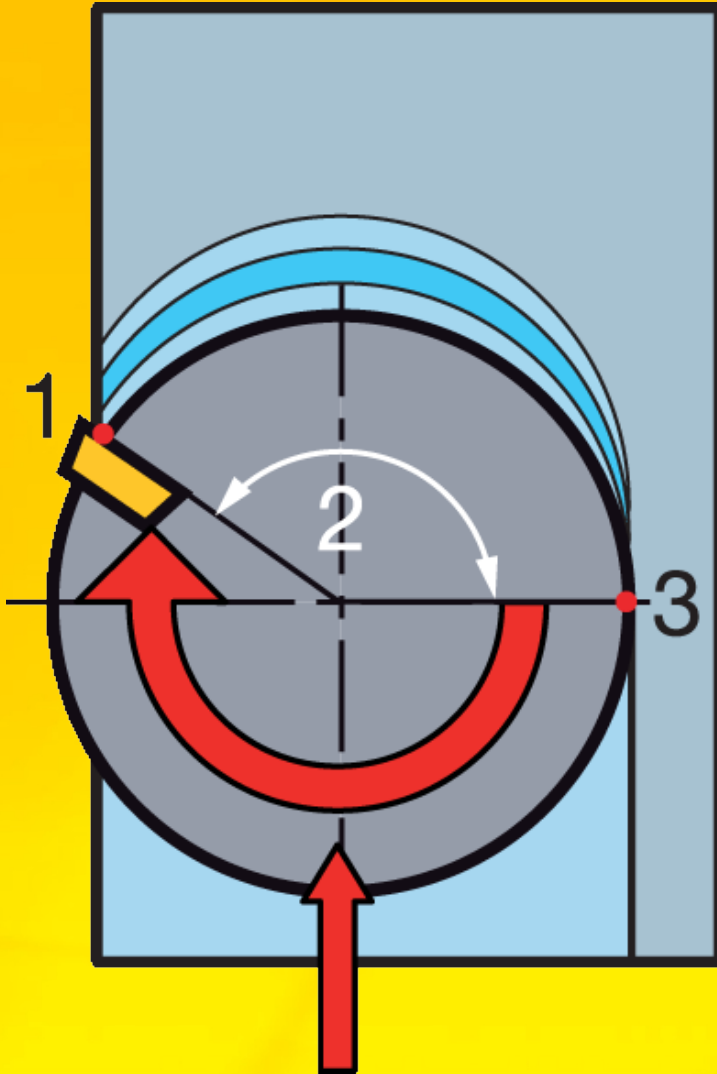
Climb milling on one side, conventional milling on the other

Straight down the center of the part

Diameter of the cutter isn't optimized



The cutter position forms the chip . . .



Thick chip on entry

Thin chip on exit

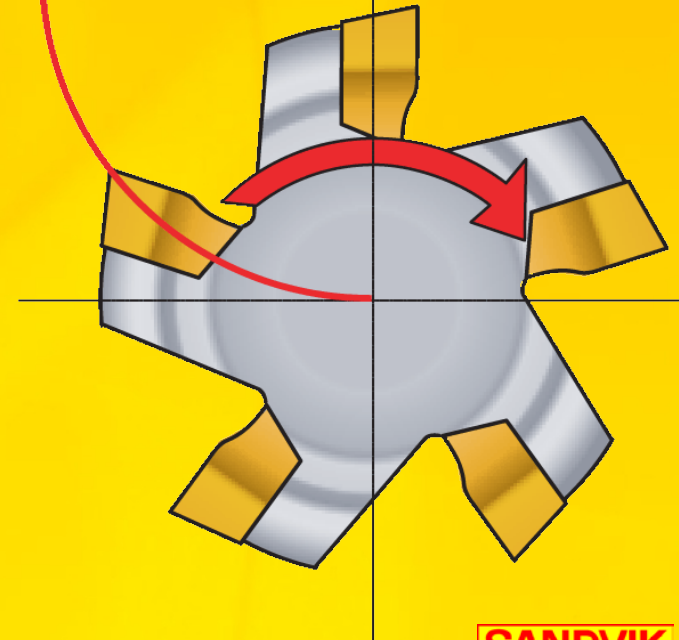
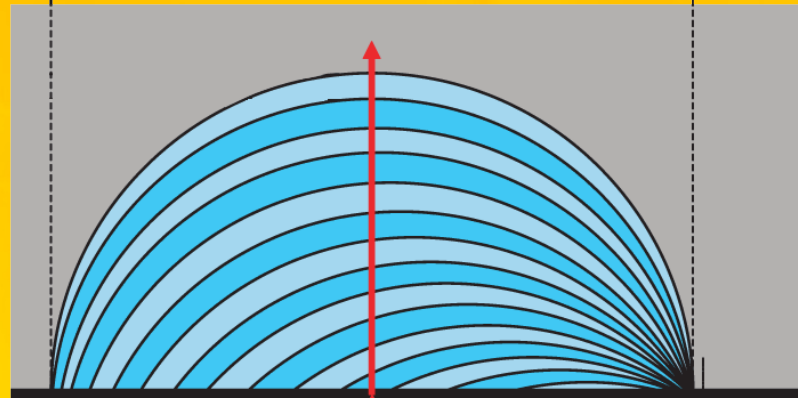
Forming the chip



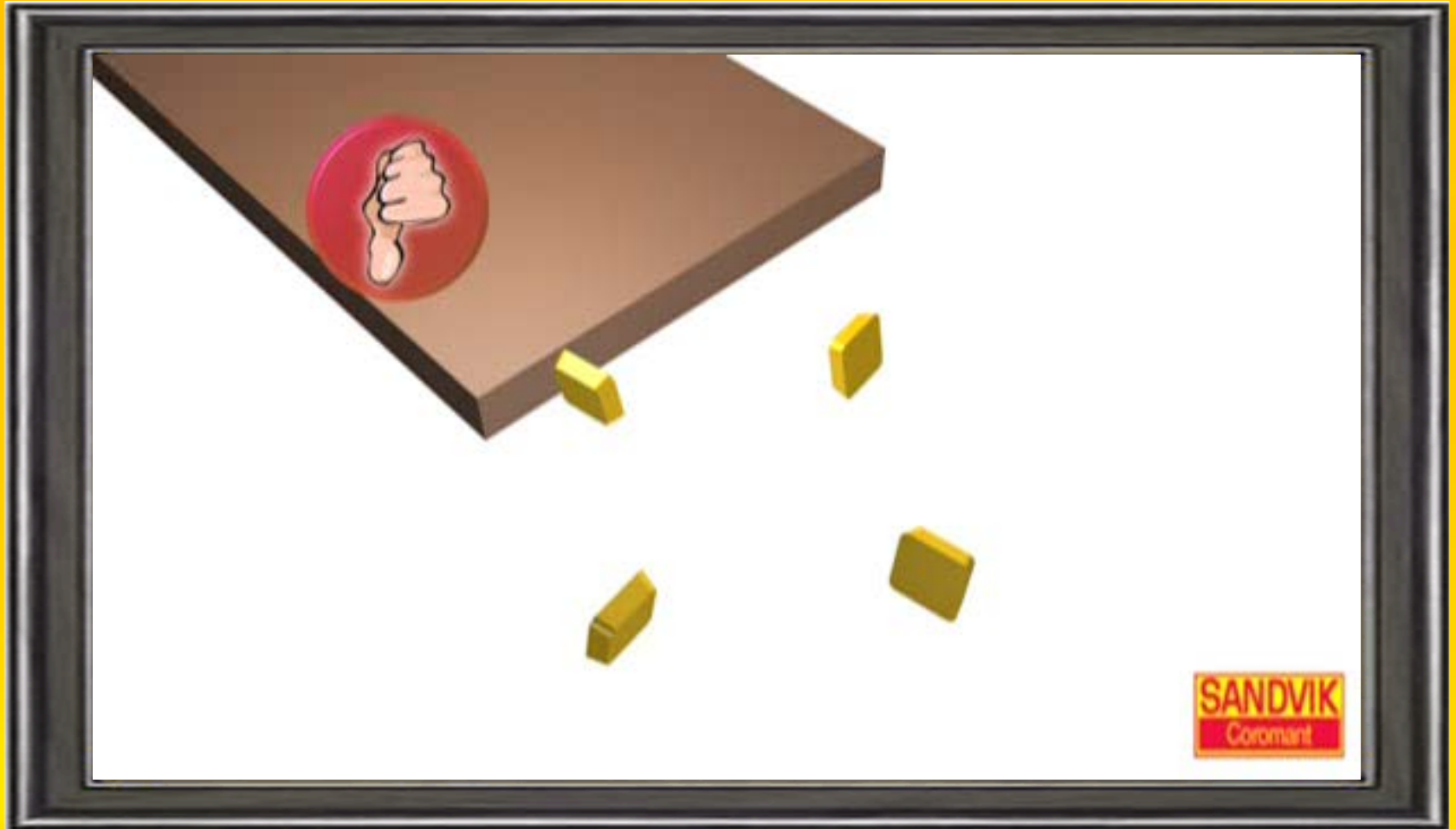
Approaching the part

Roll-in method

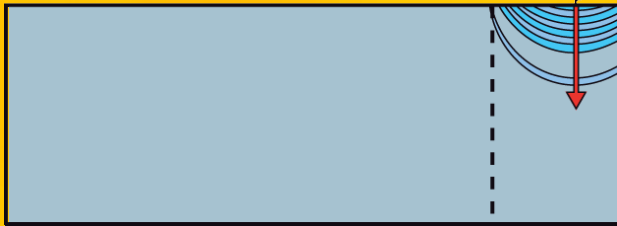
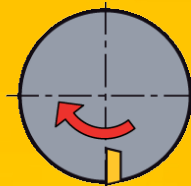
- Allows the inserts to ease into cut
- Keeps the chip thin on exit
- Reduces vibration
- Increases tool life



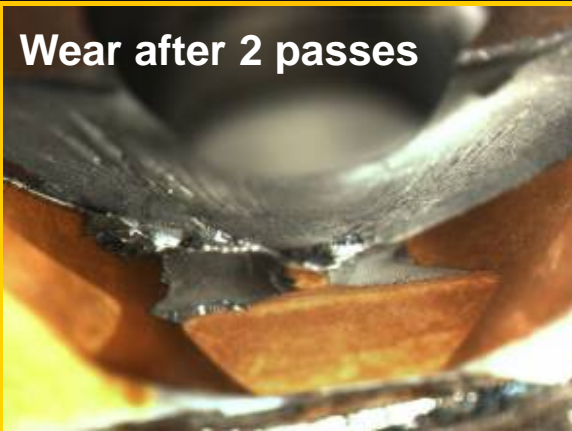
Roll-in method



Full feed directly
into workpiece



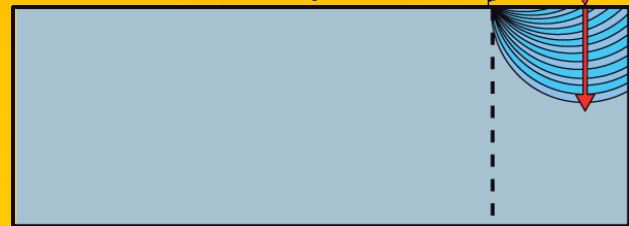
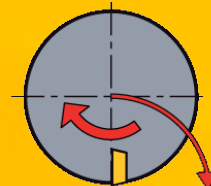
Wear after 2 passes



Wear after 3 passes



Roll in technique



Wear after 15 passes



Wear after 8 passes



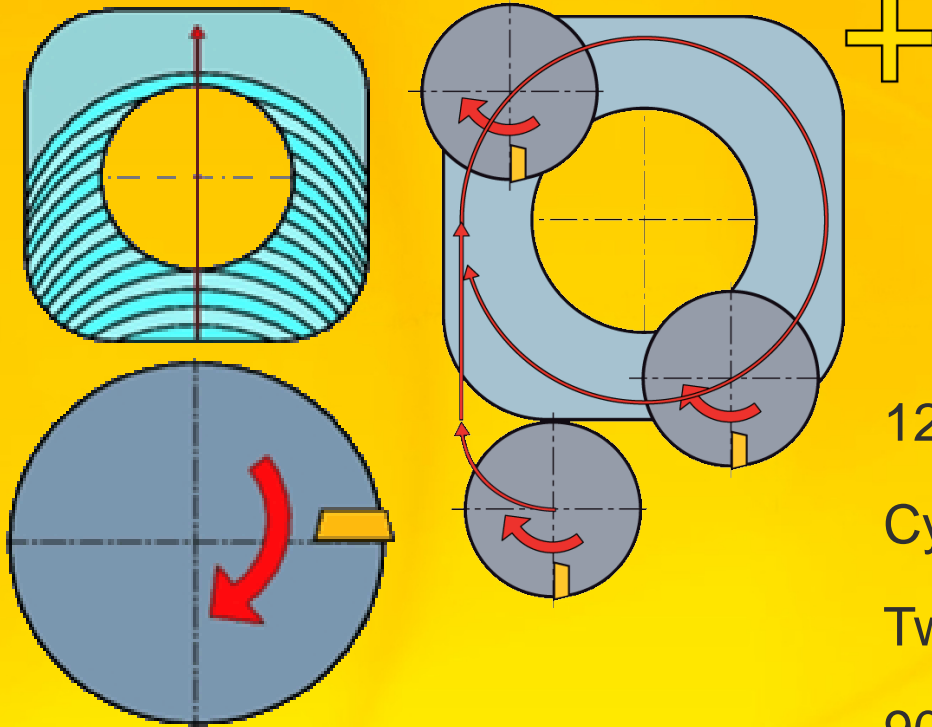
Keep the cutter engaged



SANDVIK
Coromant

SANDVIK
Coromant

Component reprogrammed



12 insert cutter to 5 inserts

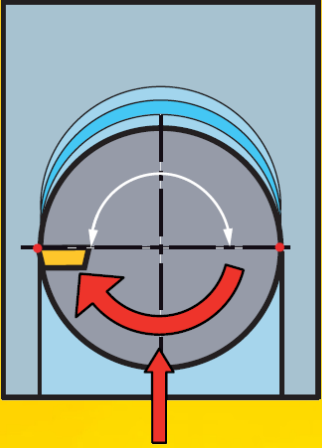
Cycle time halved

Twice as many bosses per edge

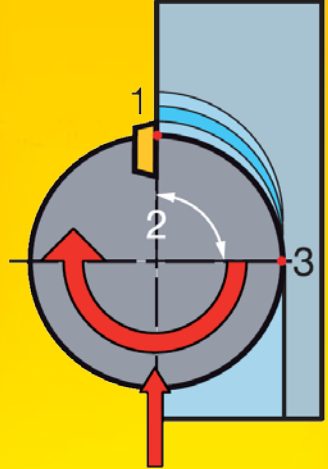
90 inserts per comp to 5

Cutter engagement

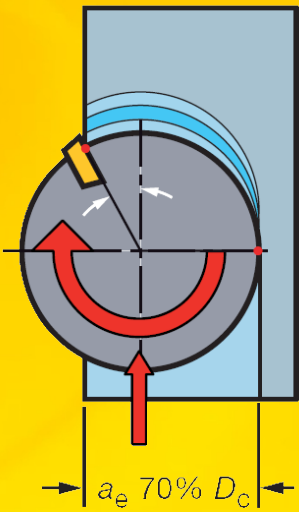
1. 



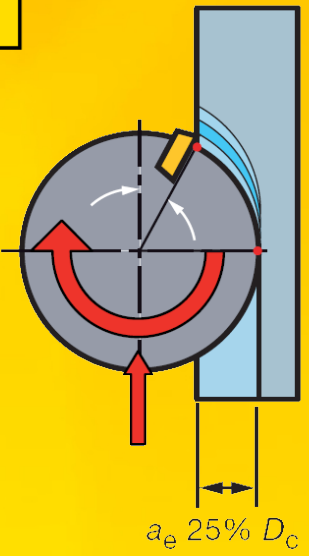
2. 



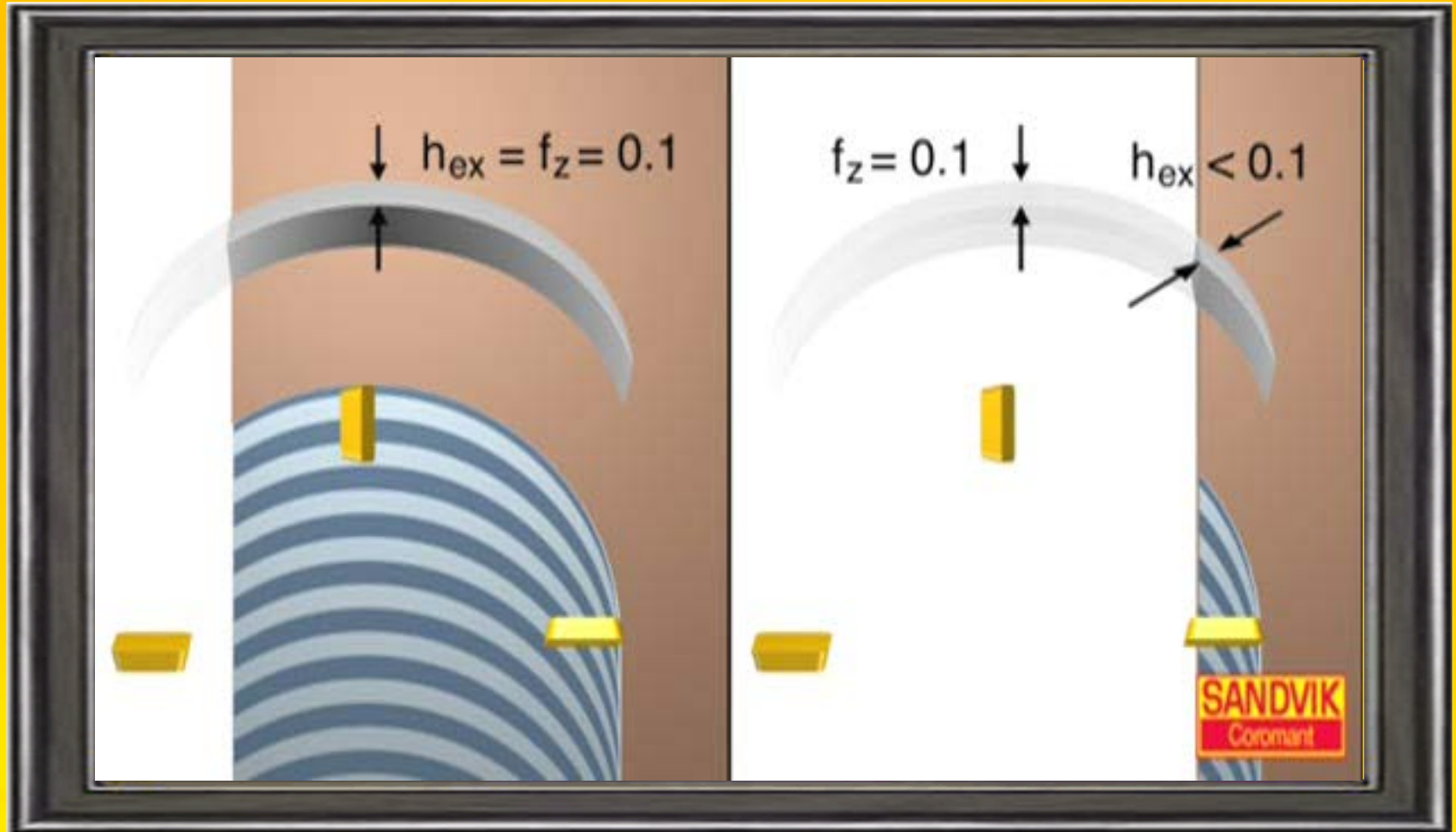
3. 



+



Effective use of the cutter diameter





Your success in focus