

Smart 3D X-ray inspection driving productivity

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The key challenges are

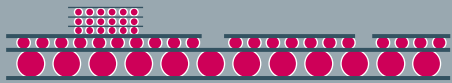
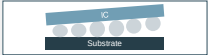
➤➤ Accelerate process ramp-ups time

➤➤ Increase yield

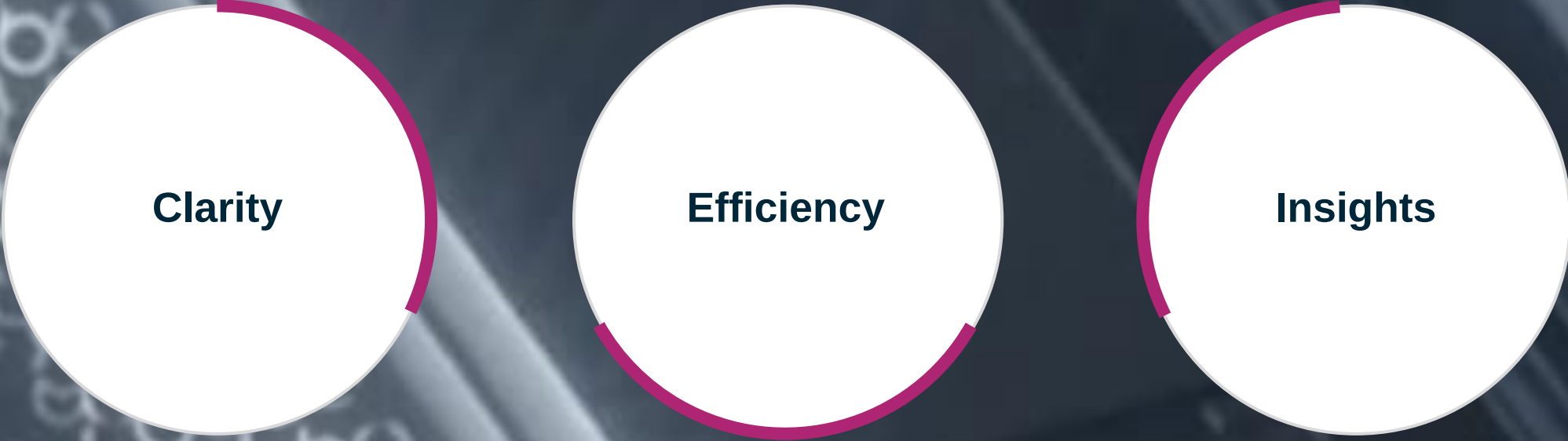
➤➤ Win time-to-market race

The power of Xray in advanced packaging

To see better. Faster. More.

Specimen: Advanced Packages		Tools for inspection / failure analysis			
		Optical	X-Ray		FIB-SEM
			2D	Next Gen 3D	
Tilt					
Missing bump					
Bridge					
Bulge/big-bump					
Small bump / non-wet					
Shift					
Void					
Missing/ Small via connect					
Head in pillow					
Substrate cracks					
Speed 		Detail recognition 			

What is needed to support the Advanced Packaging challenges through X-Ray?

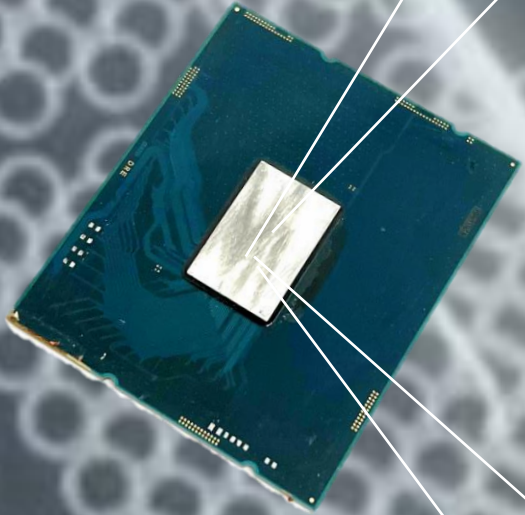


Clarity

Efficiency

Insights

CPU

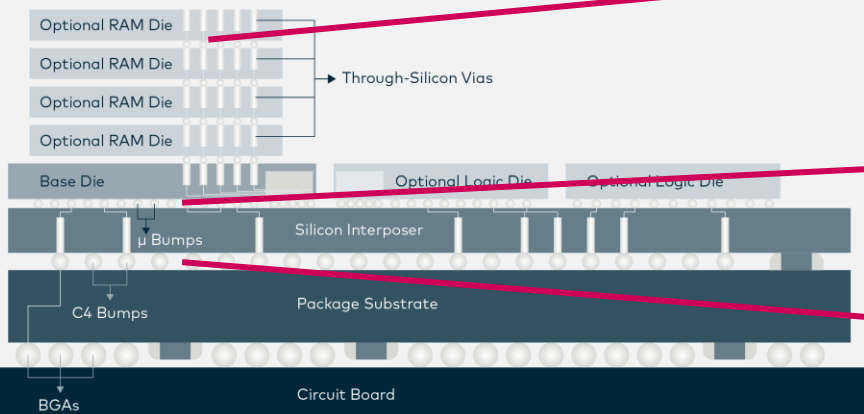


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Looking at 3D slice

Integrated Circuit (IC)/Microchip

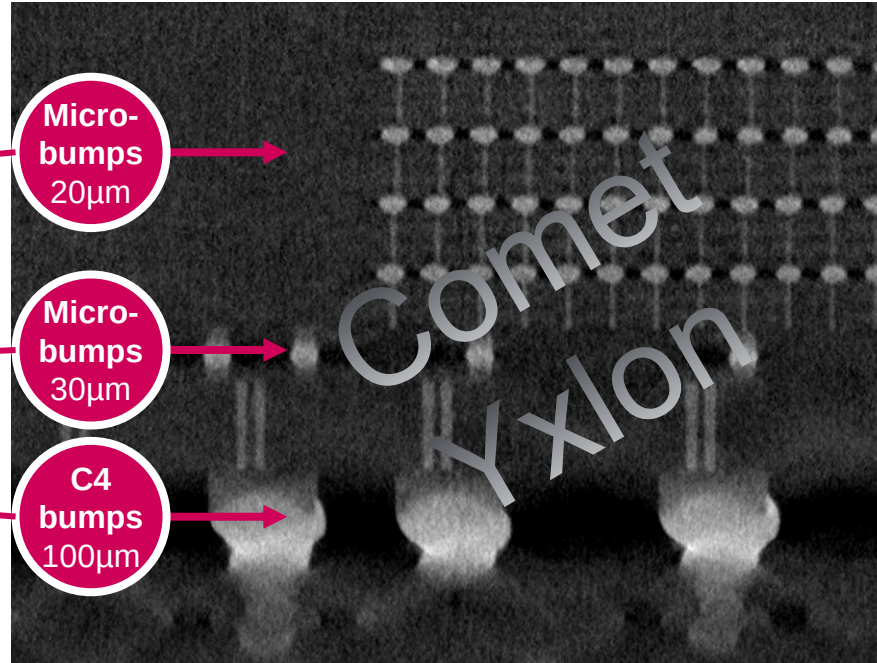
typical structure



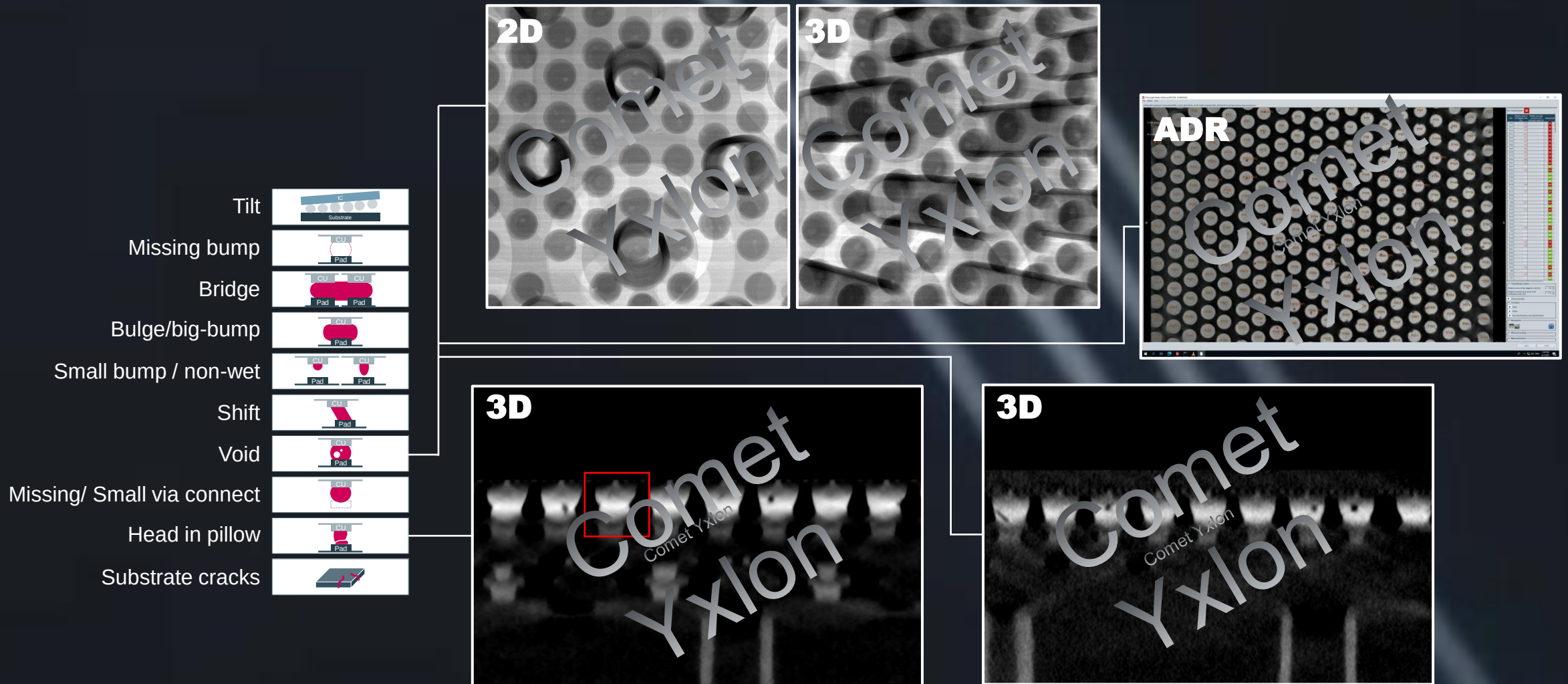
Micro-bumps
20 μ m

Micro-bumps
30 μ m

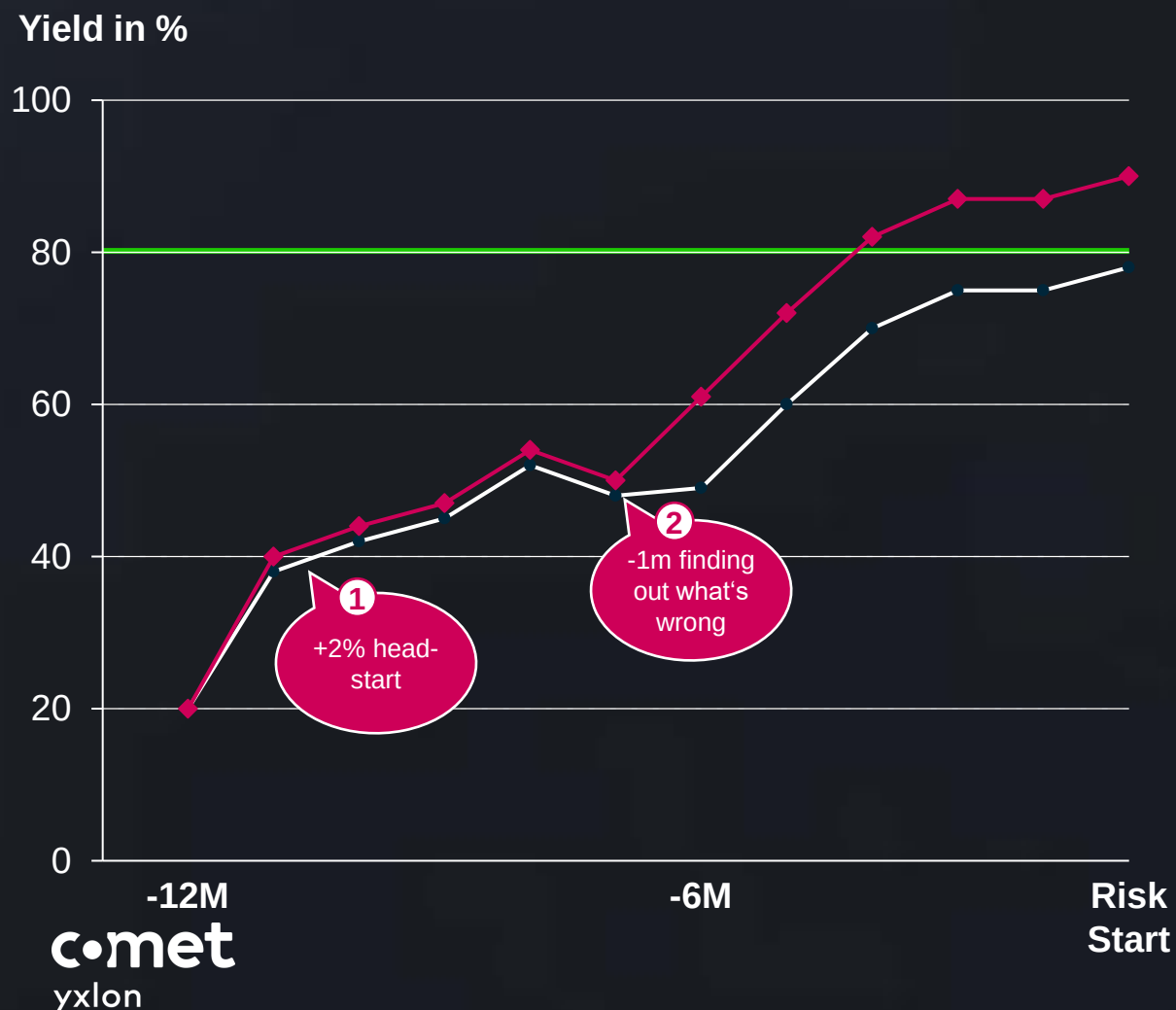
C4 bumps
100 μ m



Looking at bumps



How 3D X-Ray inspection significantly supports 3D IC process development.



1

Speed-up ramp-up

Speed-up failure analysis in implementation phase through X-Ray inspection

2

Speed-up failure analysis

Finding critical issues with real-time information and automated defect recognition



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Thank you for your attention.

Please feel free to contact me if you have any questions.

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