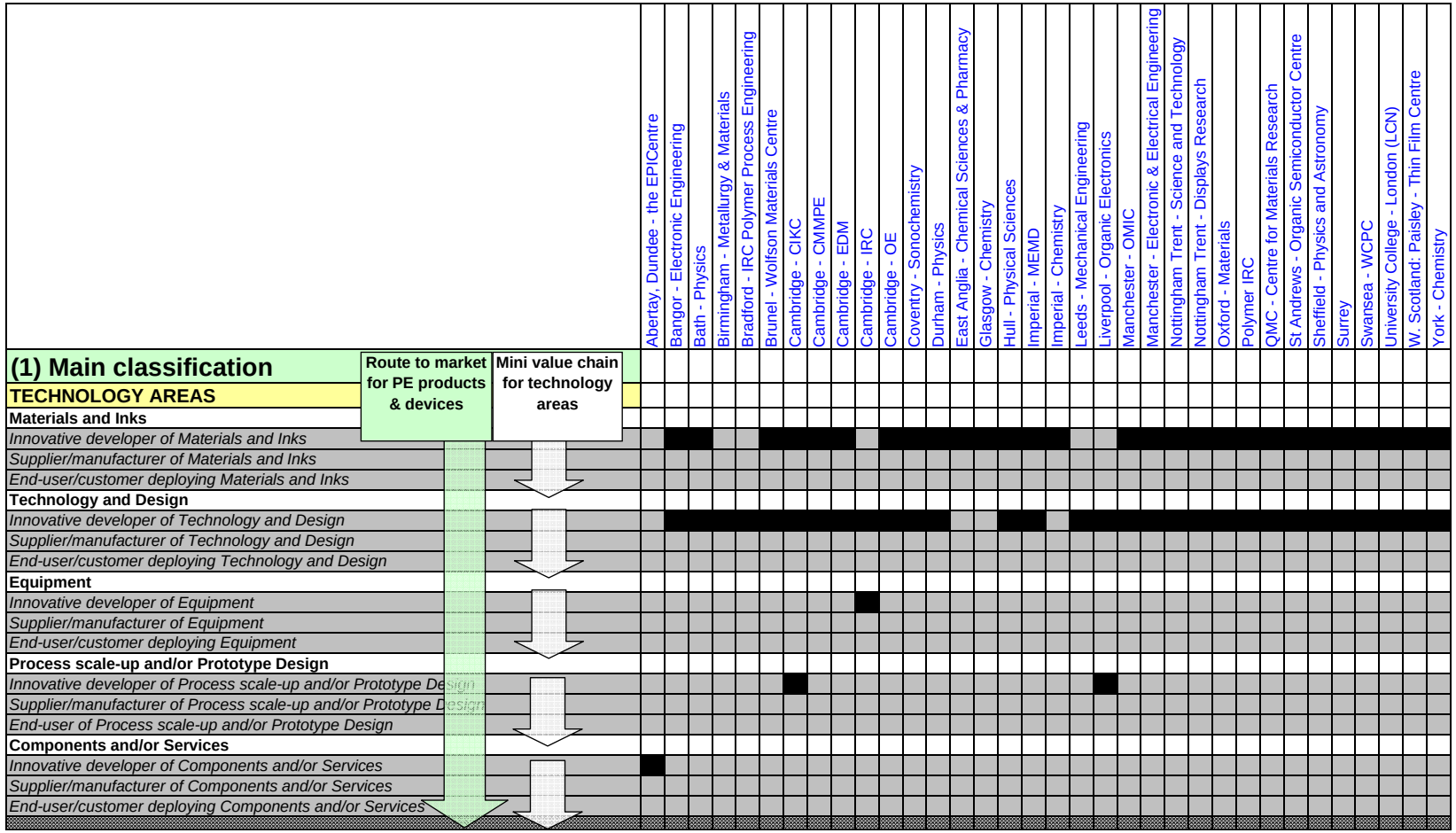
Competence Matrix for Plastic Electronics in the UK. Section 1: Universities



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Competence Matrix for Plastic Electronics in the UK. Section 1: Universities

Data collected June 2008

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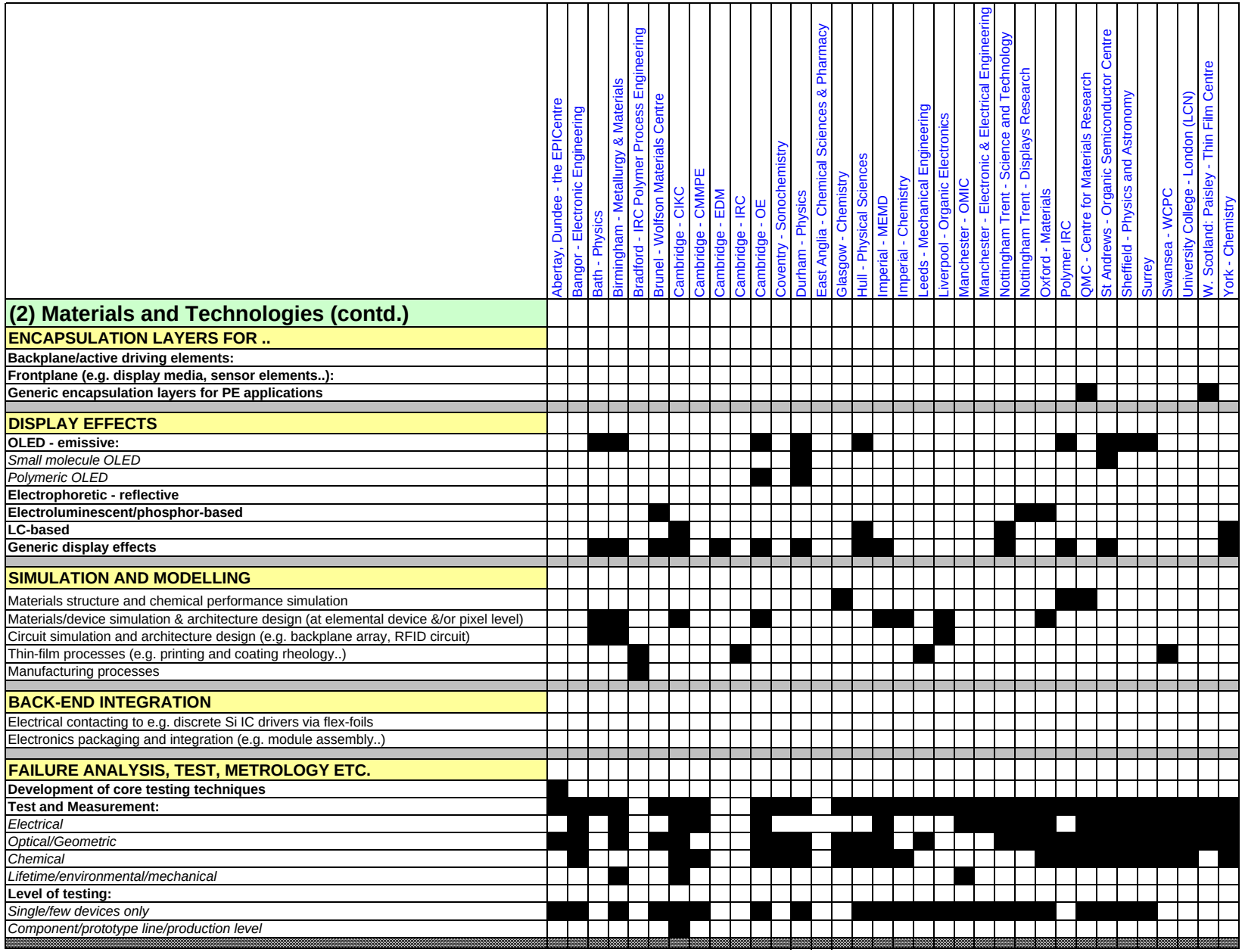

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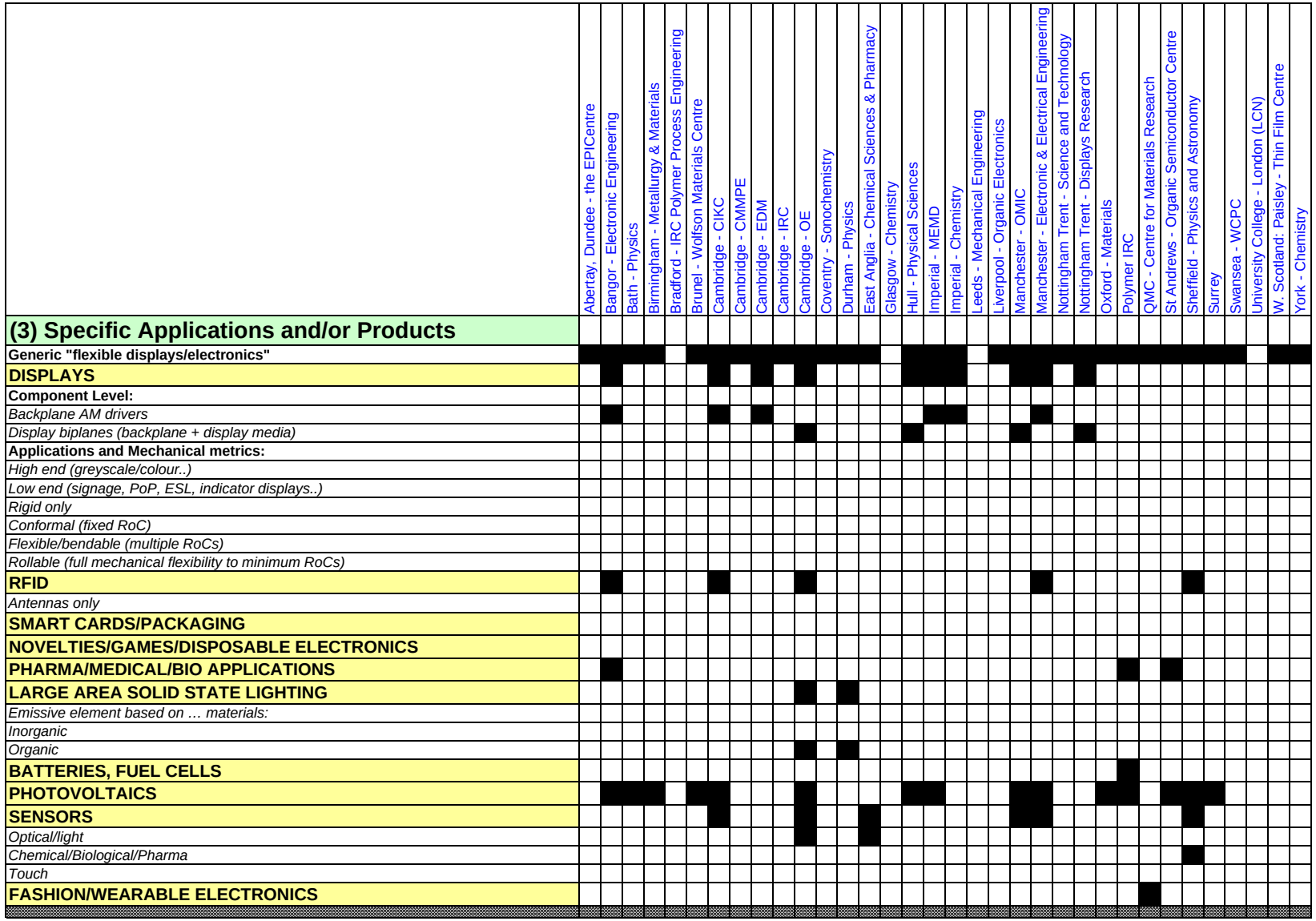

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Competence Matrix for Plastic Electronics in the UK. Section 1: Universities

	Abertay, Dundee - the EPICentre	Bangor - Electronic Engineering	Bath - Physics	Birmingham - Metallurgy & Materials	Bradford - IRC Polymer Process Engineering	Brunel - Wolfson Materials Centre	Cambridge - CIKC	Cambridge - CMMPE	Cambridge - EDM	Cambridge - IRC	Cambridge - OE	Coventry - Sonochemistry	Durham - Physics	East Anglia - Chemical Sciences & Pharmacy	Glasgow - Chemistry	Hull - Physical Sciences	Imperial - MEMD	Imperial - Chemistry	Leeds - Mechanical Engineering	Liverpool - Organic Electronics	Manchester - OMIC	Manchester - Electronic & Electrical Engineering	Nottingham Trent - Science and Technology	Nottingham Trent - Displays Research	Oxford - Materials	Polymer IRC	QMC - Centre for Materials Research	St Andrews - Organic Semiconductor Centre	Sheffield - Physics and Astronomy	Surrey	Swansea - WCPC	University College - London (LCN)	W. Scotland: Paisley - Thin Film Centre	York - Chemistry
(4) Component Manufacture and Supply																																	
Substrates:																																	
Plastic																																	
Functional inks:																																	
Organic-based inks																																	
Inorganic-based inks																																	
Active elements (e.g. display driving backplanes..)																																	
Passive elements (e.g. antennas, light guides..)																																	
Thin-film/printing/post processing manufacturing equipment and consumables:										■																							
R&D/lab scale										■																							
Prototype/manufacturing scale																																	
Display media (e.g. EP, OLED..)																																	
Simulation and modelling packages																				■													
Discrete Si driver ICs																																	
Back-end integration/flex foils/electronics packaging																																	
Test and analysis equipment/service																																	
Complete systems (in relatively low volumes/market sizes)																																	
(5) Business Model and Financing																																	
Funding:																																	
VC/angel funded (equity finance)																																	
Private funding (bank, friends-and-family or own business revenues)																																	
Majority Govt-funded/public sector entity	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Involved with Govt grant funded projects (TSB Collaborative R&D, EU FP6/7 etc.)	■	■	■		■						■	■					■	■		■		■	■	■					■	■	■	■	■	■
Current status:																																	
University - focus on Base Technology Research	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
University - Looking to also spin-out/technology transfer opportunities		■					■	■	■	■	■					■	■		■	■		■	■		■		■			■	■	■	
Small start-up/SME																						■											
Larger corporate/international organisation/established company																																	
Main Business Model(s):																																	
Open access/Open innovation/Partnership working	■	■	■		■	■	■			■	■		■						■		■	■	■	■	■	■	■		■	■	■	■	■
Licensing business model (e.g. IP..)																■			■	■		■											
Direct manufacture/supply to customers																																	
Currently involved with JDAs/JVs							■				■		■						■			■								■		■	

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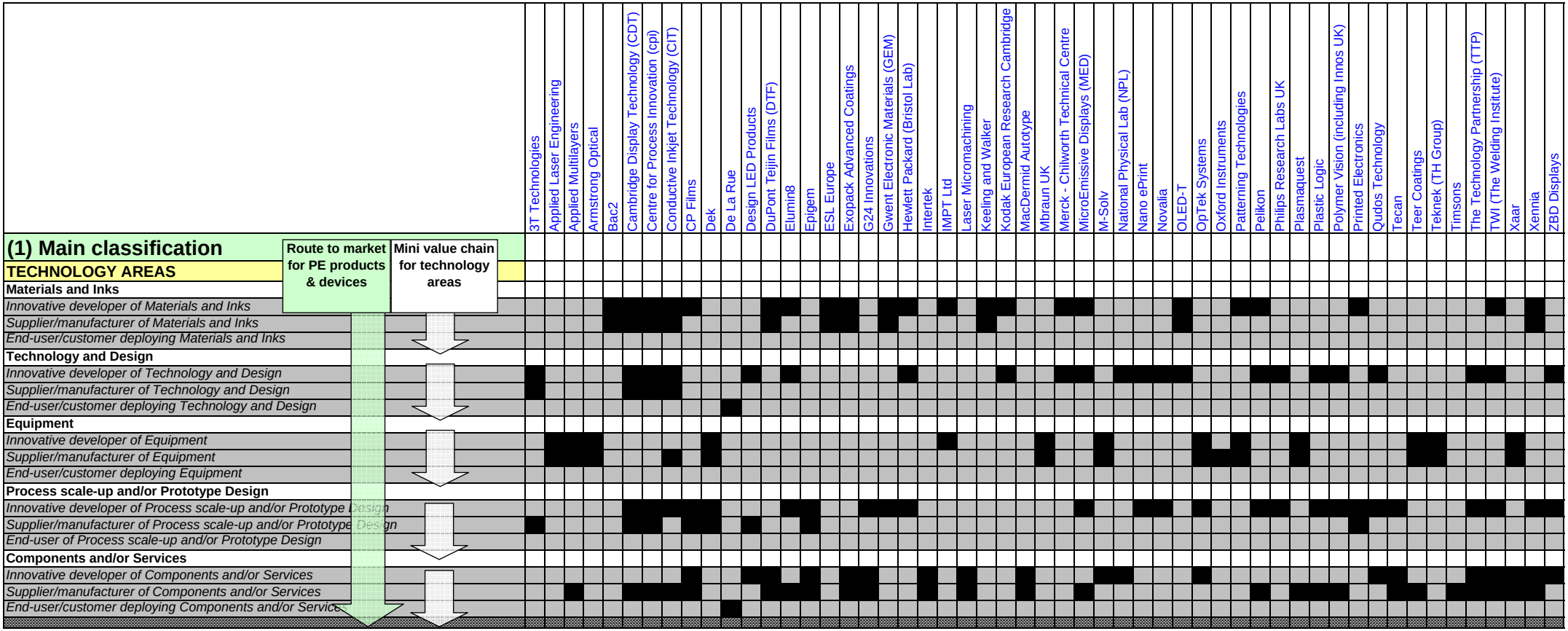
Competence Matrix for Plastic Electronics in the UK. Section 2: Companies



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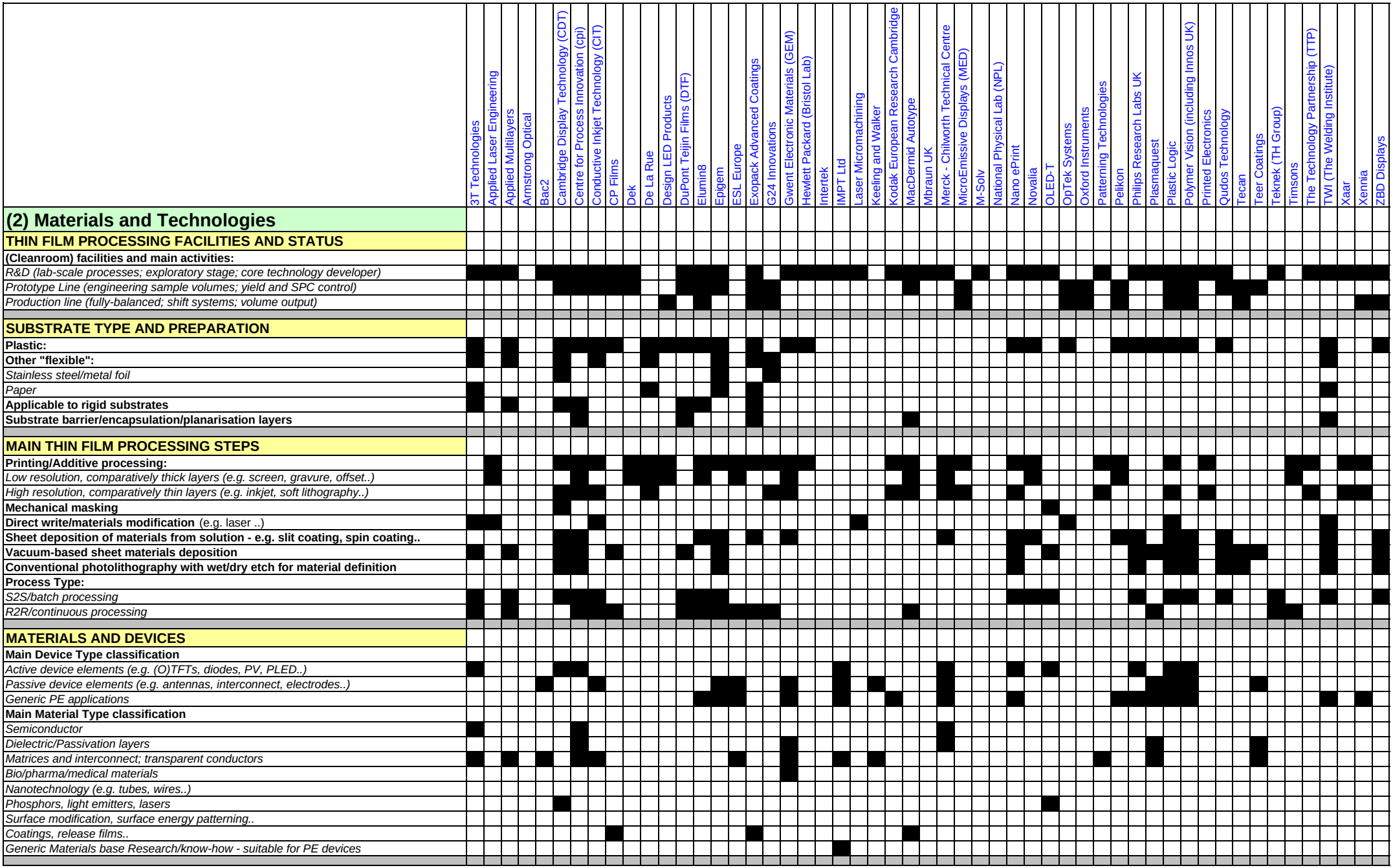
Competence Matrix for Plastic Electronics in the UK. Section 2: Companies



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Competence Matrix for Plastic Electronics in the UK. Section 2: Companies

(3) Specific Applications and/or Products	3T Technologies	Applied Laser Engineering	Applied Multilayers	Armstrong Optical	Bac2	Cambridge Display Technology (CDT)	Centre for Process Innovation (cpi)	Conductive Inkjet Technology (CIT)	CP Films	Dek	De La Rue	Design LED Products	DuPont Teijin Films (DTF)	Elumin8	Epigem	ESL Europe	Exopack Advanced Coatings	G24 Innovations	Gwent Electronic Materials (GEM)	Hewlett Packard (Bristol Lab)	Intertek	IMPT Ltd	Laser Micromachining	Keeling and Walker	Kodak European Research Cambridge	MacDermid Autotype	Mbraun UK	Merck - Chilworth Technical Centre	MicroEmissive Displays (MED)	M-Solv	National Physical Lab (NPL)	Nano ePrint	Novalia	OLED-T	OpTek Systems	Oxford Instruments	Patterning Technologies	Pelikon	Philips Research Labs UK	Plasmaquest	Plastic Logic	Polymer Vision (including Innos UK)	Printed Electronics	Qudos Technology	Tecan	Teer Coatings	Teknek (TH Group)	Timsons	The Technology Partnership (TTP)	TWI (The Welding Institute)	Xaar	Xennia	ZBD Displays
Generic "flexible displays/electronics"	■	■	■		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
DISPLAYS	■					■	■	■	■			■	■	■						■		■		■	■	■		■	■		■		■					■	■		■	■			■									■
Component Level:																																																					
Backplane AM drivers	■						■																					■				■	■								■	■												
Display biplanes (backplane + display media)						■						■								■									■					■																				■
Applications and Mechanical metrics:																																																					
High end (greyscale/colour..)						■														■																						■	■												
Low end (signage, PoP, ESL, indicator displays..)						■						■		■						■																			■			■												■
Rigid only																																																					
Conformal (fixed RoC)																																																					
Flexible/bendable (multiple RoCs)												■																															■										
Rollable (full mechanical flexibility to minimum RoCs)																																												■									
RFID	■							■			■		■						■													■																						
Antennas only								■							■				■																																				
SMART CARDS/PACKAGING	■					■		■			■	■	■						■														■																						
NOVELTIES/GAMES/DISPOSABLE ELECTRONICS	■					■		■				■	■						■														■																						
PHARMA/MEDICAL/BIO APPLICATIONS						■						■	■		■				■																																				
LARGE AREA SOLID STATE LIGHTING						■		■				■	■	■	■				■																■																					
Emissive element based on … materials:																																																					
Inorganic														■																																								
Organic						■																													■																				
BATTERIES/FUEL CELLS					■			■					■					■																																					
PHOTOVOLTAICS						■	■	■					■				■					■		■																															
SENSORS	■					■		■					■		■				■													■														■								
Optical/light	■					■									■																																							
Chemical/Biological/Pharma																																																					
Touch																																							■															
FASHION/WEARABLE ELECTRONICS																																																					

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Competence Matrix for Plastic Electronics in the UK. Section 2: Companies

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R&D/lab scale		■	■					■	■	■													■			■	■		■					■	■			■					■		■	■			■	■	
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Private or company funding (bank, friends-and-family or own business revenues)				■					■	■	■		■		■	■	■		■	■	■	■	■	■	■	■	■	■			■			■			■	■	■						■	■	■	■	■	■	■	
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Direct manufacture/supply to customers		■	■	■	■			■	■	■	■	■	■	■	■	■	■	■		■		■	■		■	■	■	■	■	■	■		■	■			■	■	■			■	■			■	■	■	■	■	■
Currently involved with JDAs/JVs						■	■						■	■		■									■			■					■						■	■	■						■	■	■		