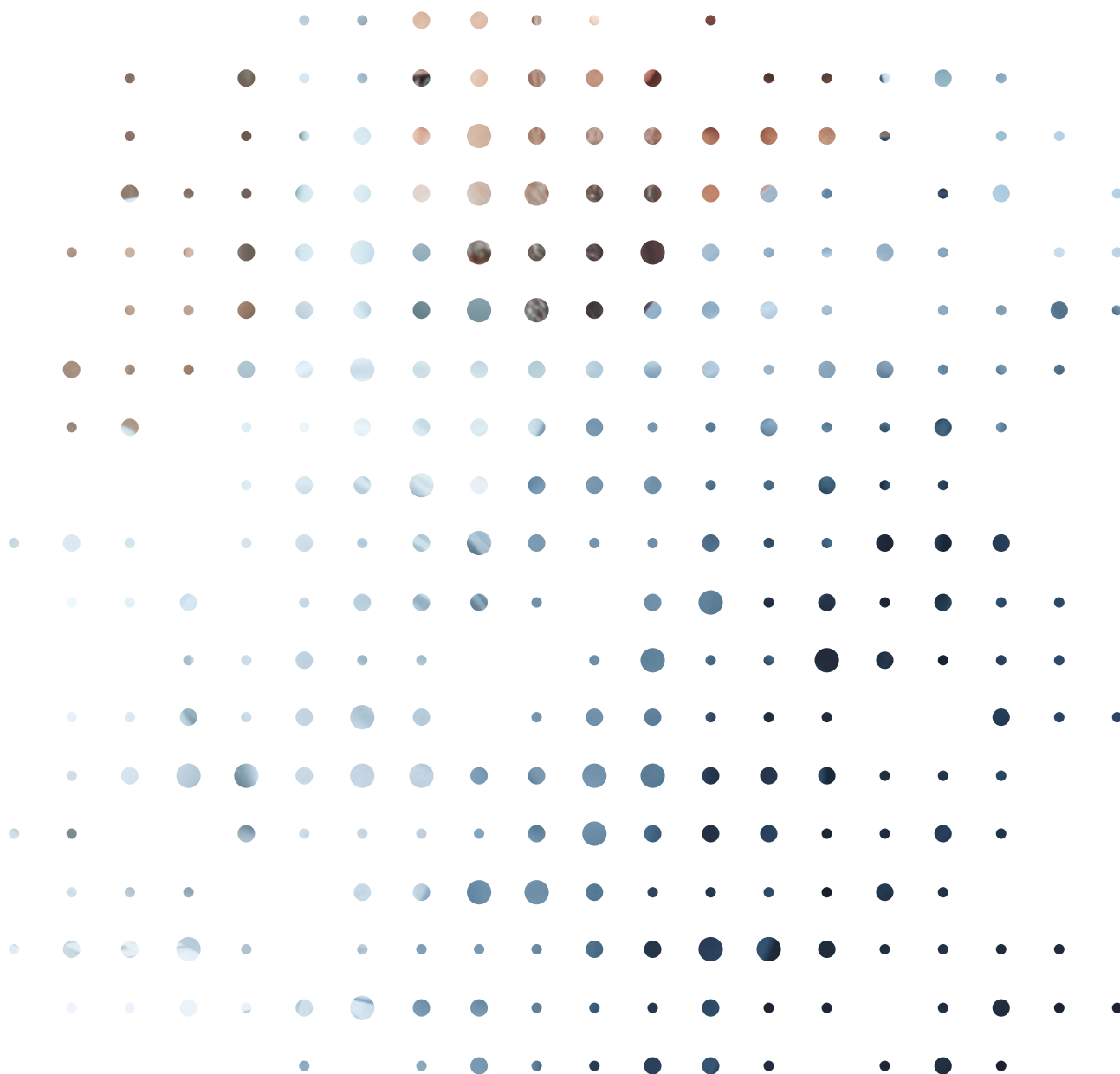


Ink for inkjet print system developments



Partner with the experts in **INKJET**

We specialize in ink technologies for inkjet. Our global team, technology development and manufacturing resources are focused on delivering performance-driven inks to enable success in digital print systems.



Contents

4	Ink Solutions
6	Our Approach
8	Specification
10	Ink Development
12	Technology Portfolio
14	Validation
16	Expertize
18	Manufacturing
20	Sustainability



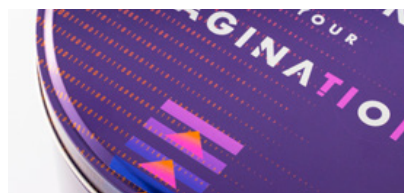
INK SOLUTIONS

Enabling your success in inkjet

Fujifilm provides expert inkjet ink development and manufacturing services for OEMs, converters and brands developing or adopting industrial inkjet print systems. We have in-depth experience to deliver ink solutions that meet your goals.



Inks for next generation print system developments



Inks to enable new fields of application



Inks to improve process efficiency and performance



Ink technologies

We specialize in key ink technologies, supported by a vast portfolio of foundational technology that we leverage in an ink development.



Aqueous

Fast-drying, versatile inks with compliance and environmental consideration priorities.



UV

Fast-curing, durable, functional, versatile inks.



UV LED

Durable, functional inks with energy-efficient curing.

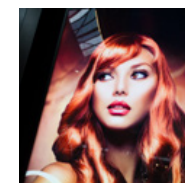


Hybrid

Combining ink technologies to achieve unique performance for specialized applications.

Market sectors

Our inkjet ink developments span multiple market sectors, with tailored solutions that meet the unique demands of specific applications.



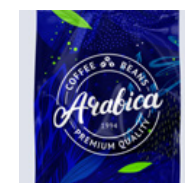
Sign and Display

Enabling system developments with proven ink technologies that meet standards for safety and environment.



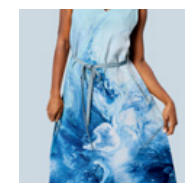
Commercial

Ink technologies optimized for high-speed, high-quality printing on papers.



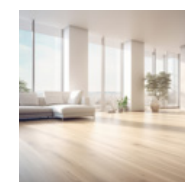
Packaging

Ink technologies designed to meet the challenging performance, regulatory and sustainability requirements of the packaging industry.



Textile

Aqueous pigment ink technologies for the sustainable future of digital printing on natural and synthetic textiles.



Industrial

Robust ink solutions for demanding applications with unique requirements for functionality and compliance.

OUR APPROACH

Performance-driven ink solutions

Leveraging Fujifilm's vast experience in ink, inkjet and imaging, we deliver high performance ink solutions. The Fujifilm approach to successful inkjet ink developments integrates five areas of competence:



Client-Centric

We prioritize building strong, long-term relationships with customers and technology partners, offering personalized developments to meet your specification and timelines with expert problem-solving through complex inkjet developments.



Market-Driven

We have the technology and insight to access digitizing print markets, specialists that understand the unique demands of applications, and technology co-supplier collaboration to deliver valuable inkjet ink solutions.



Core Technology

We excel in UV, aqueous, and hybrid ink development, leveraging a vast inkjet technology and IP portfolio, with core ink component development that gives us full formulation control, for optimized products.



Experts in Inkjet

With a longstanding presence in inkjet technology, we are expert partners who deeply understand inkjet and are dedicated to inkjet advancements, providing tailored expert guidance, with global capability.



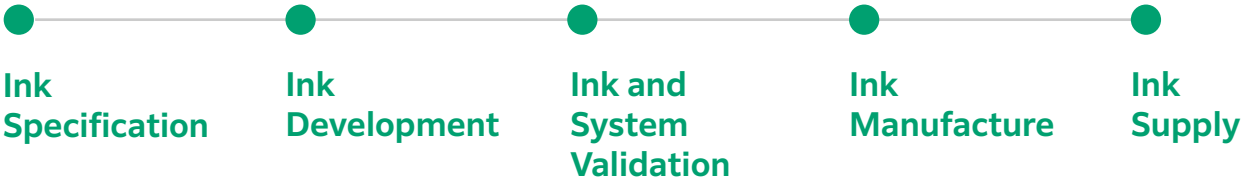
Comprehensive Development

Our InkDev360™ approach uses multi-disciplinary technical expertise to efficiently deliver robust ink developments for real-world performance. Sustainability is a core consideration in our products and operations.



In every formulation, innovation and process, our aim is to deliver a robust and efficient ink solution for your print system.

A comprehensive approach to ink supply, from an experienced partner in inkjet:

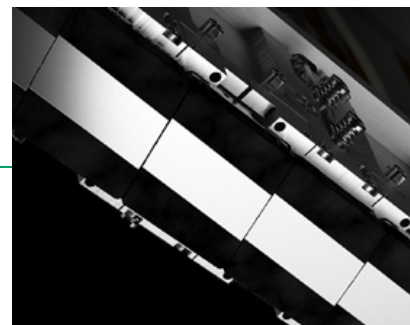


SPECIFICATION

Inkjet inks for real-world performance

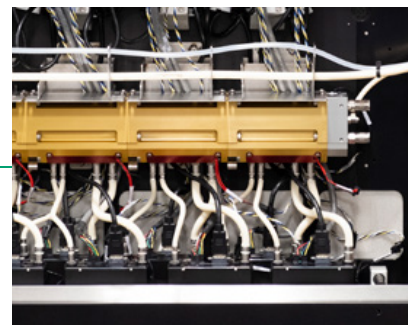
We take a comprehensive approach to ink development, optimizing for robust performance in the system, through the print and production processes and for the product application.

This approach makes detailed consideration of all ink and fluids interactions, over time, in real-world conditions.



Printhead

- Precisely matching viscosity requirements.
- Design for temperature control through the ink delivery system.
- Waveform optimization for precise drop control.
- Drop + satellite control to achieve optimum quality at target speed.
- Compatibility with nozzle plate coatings.



System

- Ink interactions throughout the print system.
- Chemical compatibility with components.
- Curing and drying specifications.
- Accurate drop formation and placement.
- Maintenance processes, cycles and fluids.
- Print speed and printhead-ink sustainability.

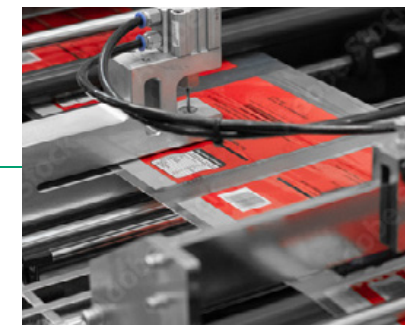


Substrate

- Achieving target image quality at target print speed.
- Functionality to meet specified chemical and physical properties.
- Color reproduction and gamut.
- Ink-substrate interaction.

Print systems of any scale

From single-color print bars, to the highest productivity full-color machines, our capabilities encompass inks for scanning and single-pass print system configurations of any scale.



Production processes

- Media pre-treatment and post-process requirements.
- Compatibility with under and overprint ink layers and lamination.
- Finishing processes.



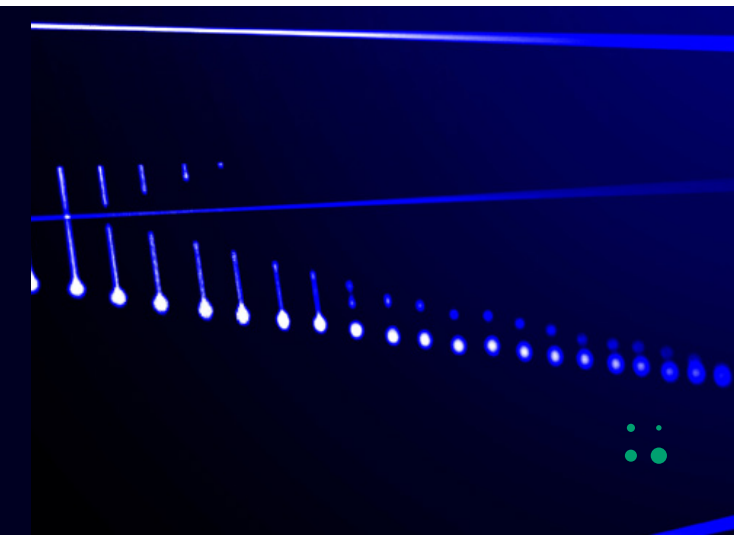
End application

- Robustness for the lifetime of the printed product.
- Regulatory and registration requirements.
- Industry specific standards (e.g., IDFC, OEKO-TEX).
- End of life disposal and recyclability.

Ink is a core component of your print engine, and the color, communication and impact of the product it delivers.

Inks for all major printheads

We work with printheads from all major manufacturers, including piezo and MEMS technologies. Printhead and ink combination performance is a crucial part of the system to optimize. Collaboration with Fujifilm ink experts early on in your development enables optimization of components and ink interactions throughout the whole system.



INK DEVELOPMENT

Project-Based Ink Development™

Fujifilm's Project-Based Ink Development program is a flexible, tailored approach that can accommodate all levels of configuration complexity to meet your ink requirements. Through a project-managed, collaborative process between our teams, your teams and co-supplier technology partners, it ensures you get a high-quality, validated, robust ink to market in the shortest time.

Multi-disciplinary approach

InkDev360™ is Fujifilm's multi-disciplinary approach to Project-Based Ink Developments.

By integrating the expertise of ink specialists in science, engineering and application disciplines, InkDev360™ enables Fujifilm to:

- Provide a comprehensive ink development that considers every aspect of ink functionality, performance and interactions.
- Deliver a robust, validated ink solution that precisely meets the requirements of the print system, processes and application.
- Overcome problems that can be encountered in complex inkjet developments to ensure success.

Formulation



Ink functionality

Our experienced chemists leverage a portfolio of technology and IP to formulate an ink that meets the requirements of the printhead, system and final application. They have access to a global network of laboratories with the latest equipment for ink design, analysis and testing.

Applied Integration™



Compatibility with system

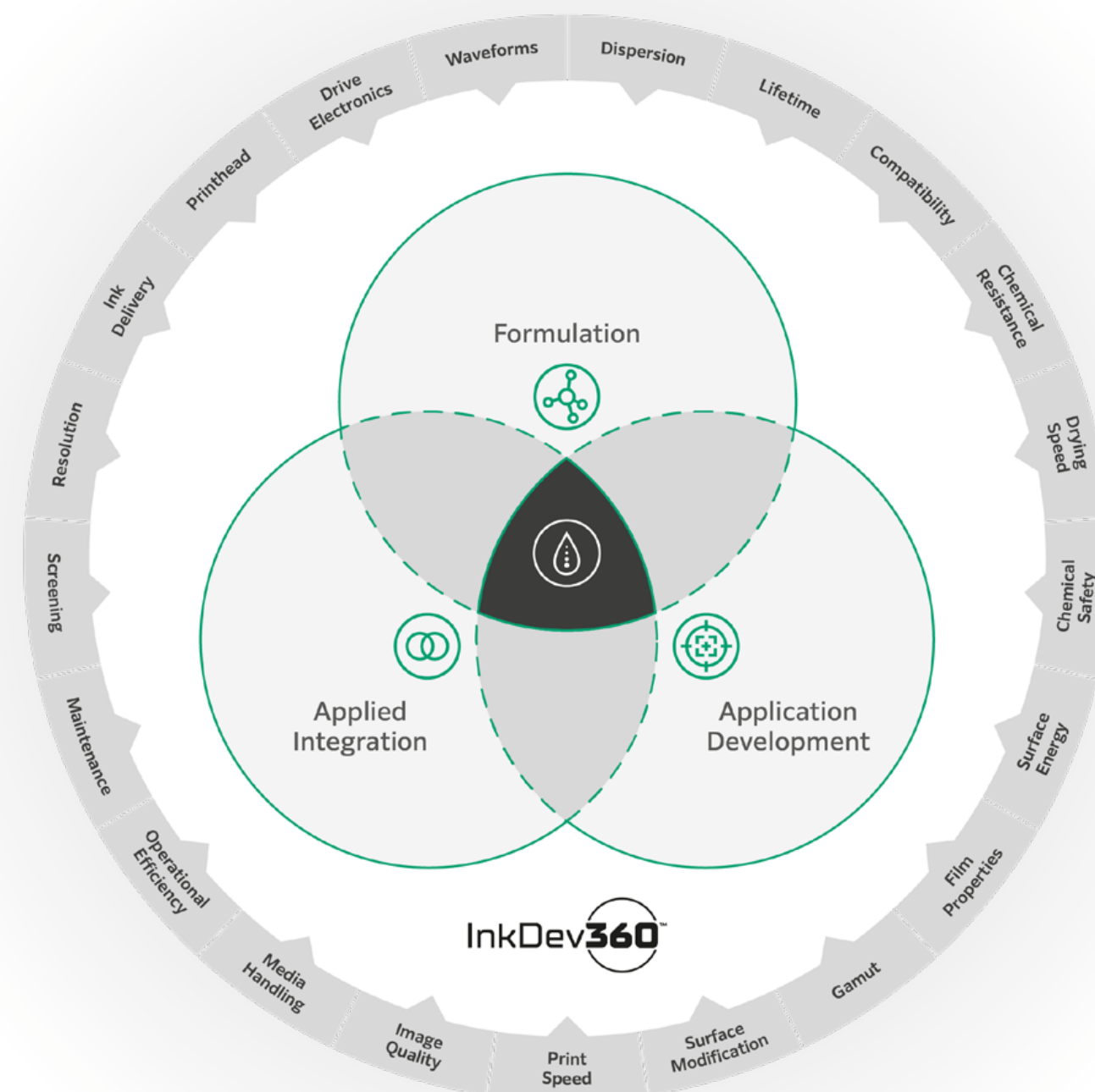
Our team of inkjet technologists speak the language of the inkjet system, applying engineering and physics to complex problem-solving during a development. They analyze ink interactions to ensure ink and hardware are harmonized to achieve your end-goal.

Application Development



Ink performance

Our team of Application Specialists provide comprehensive testing, qualification, and validation to ensure the ink precisely meets your requirements. Through an objective and data-driven approach, they work with all teams to guide and inform the development to launch and beyond.



InkDev360™

Fujifilm's multi-disciplinary approach to ink development ensures efficient delivery of a robust ink solution.

TECHNOLOGY PORTFOLIO

Enabling inkjet applications

Fujifilm is a technology company with vast experience in imaging, inkjet and chemistry, and a philosophy of innovation through core technology development. When your application demands new technology, our global resources enable us to create custom ink formulations from the ground up.

By owning and controlling a large portfolio of IP and core ink components such as pigment dispersions, we have full control over the formulation - to deliver the full potential for operability, functionality, jetting and compliance. It also means that we can provide products with assurance of freedom to operate.

Proprietary pigment dispersion technology

The pigment dispersion is the foundation of an ink formulation. Its role is to ensure microscopic pigment particles remain evenly suspended in the liquid ink.

Fujifilm develops its own aqueous and UV pigment dispersion technologies. They are engineered for exceptional stability, purity and high pigment concentration to enable high quality, functionality and jetting performance in the ink.

Development routes

There are three possible starting points for your development, to precisely meet your requirements.

Platform ink

System-ready solutions, refined if necessary to meet your specific needs.

Concept ink

System-qualified inks, providing a starting point for customization.

Fundamental technology

Custom ink formulations to meet demanding specifications.

Ink technology development

Fujifilm has a global team of chemists and laboratories between Japan and Europe, with the latest equipment for ink design, analysis and testing.

We leverage our technology and expertise in five disciplines to develop high-performance inks and fluids:



Fundamental Chemistry



Dispersion Science



Formulatory Science



Surface Coatings



Regulatory & Compliance

We take care of compliance

Our in-house compliance expertise helps you plan in advance of legislation, environmental and safety requirements. We maintain registrations, labelling and safety data, and have a program to ensure products remain up-to-date.



VALIDATION

Scalable development and testing

Our development teams are equipped with a global suite of analytical and testing equipment. Our capabilities span from lab-controlled tests, where ink properties and behavior are evaluated under controlled conditions, to full system testing using single-pass or scanning technology.

By pushing ink to its operational limits we determine the performance window of the ink, giving you the assurance and confidence in its reliability and functionality.



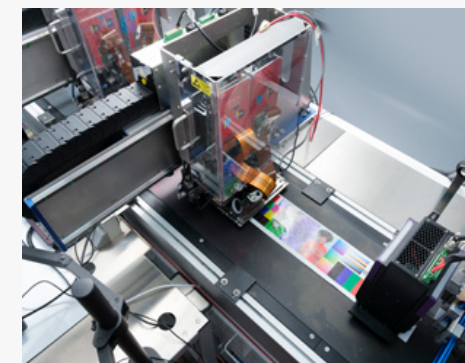
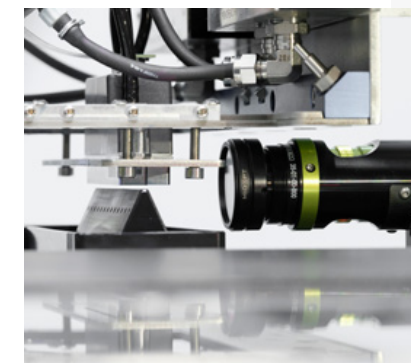
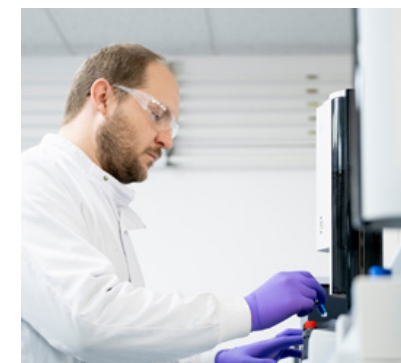
Application Development Centre

Fujifilm's Application Development Centre is a state-of-the-art testing and validation facility for inkjet ink development at our headquarters in Europe. Equipped with cutting-edge printing and testing equipment, the center enables analysis and optimization of ink performance before on-press trials.

By simulating critical elements of the print system and process in controlled laboratory conditions, our Application Specialists assess ink performance, image quality, and essential parameters vital for successful ink development.

Testing Capabilities

- Chemical migration
- Physical testing
- Analytical testing
- Jetting
- Single-pass systems
- Scanning systems
- Image quality
- Coatings



EXPERTIZE

Committed to your success in inkjet

We've grown our expertise in aqueous, UV and hybrid technologies over the last 25 years, through investment in our people, infrastructure and working with leading OEMs.

Our global team of experts in inkjet ink includes chemists, technologists, engineers, application specialists, manufacturing teams, supply chain and commercial teams committed to delivering the best performance in inkjet ink for our customers.

Our commercial team is focused on ensuring we meet every detail of your needs.



“Partnering with the right specialists, who expertly manage the complex technical details of ink performance, allows you to focus on ensuring your inkjet system meets its intended goals.”

Richard Fisher

Technical Manager



Guidance through complex developments

Our collaborative approach with technical experts in inkjet ensures efficient problem-solving during complex ink developments, to achieve successful outcomes.

Through our team of inkjet Application Specialists, who understand the whole application environment - ink characteristics, print system, print processes and final product - we offer comprehensive support during a development. And leveraging Fujifilm's extensive inkjet knowledge, we assist you in bridging gaps in your inkjet application know-how.





MANUFACTURING

Reliable, consistent ink and supply

We are experienced in supplying inkjet ink to a global customer base. So, we know what it takes to meet the most demanding requirements for reliability and consistency.

All parts of ink production (dispersion, blending, purification and packing processes) are carried out in-house. Our end-to-end manufacturing processes are supported by analytical and quality control laboratories to deliver quality-assured products with precise batch-to-batch consistency.

Ink packaging solutions

Our ink packaging includes a wide range of standard, bespoke and tailored solutions. Configure connectivity and security features, branding and labelling to your requirements.

Our packaging meets international standards and is rigorously tested to ensure reliability.



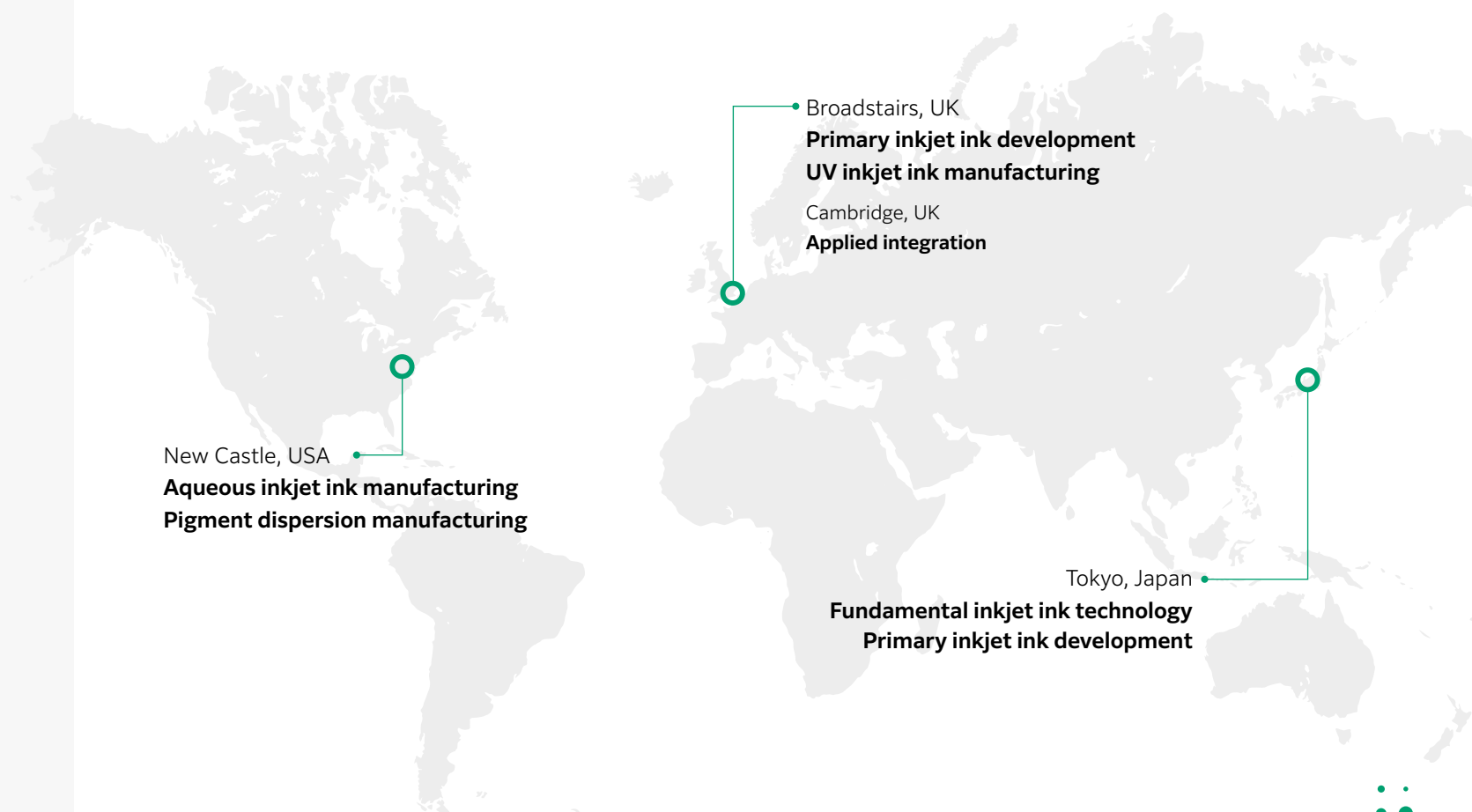
Across our global production facilities, we aim to deliver:

- Excellent customer experience.
- Commitment to quality and consistency.
- Manufacturing to the highest recognized international certified standards and best practices.
- Efficient logistical operation for delivery of products worldwide.

Global resources dedicated to ink

Fujifilm has dispersion and ink development and manufacturing centers across strategic locations in the USA, Europe and Japan.

To continuously strengthen our world-class capabilities in inkjet ink and dispersions we continuously invest in our people, processes, infrastructure and sustainability, to ensure a bright future for inkjet.



New Castle, USA
Aqueous inkjet ink manufacturing
Pigment dispersion manufacturing

Broadstairs, UK
Primary inkjet ink development
UV inkjet ink manufacturing
Cambridge, UK
Applied integration

Tokyo, Japan
Fundamental inkjet ink technology
Primary inkjet ink development

SUSTAINABILITY

Making ink technologies part of the sustainable solution

As a major global producer of inkjet inks and dispersions, we take sustainability seriously in our business, to reduce the environmental impact of our own production and operations, and to develop products and services that ensure our customers can deliver on their sustainability commitments.

Green value climate strategy

At the heart of our approach is Fujifilm’s “Green Value Climate Change Strategy”, built on the UN 2030 Agenda for Sustainable Development, which provides a shared blueprint for people and the planet.

Green Value Manufacturing

Manufacturing with low environmental impact.

Green Value Products

Creation and promotion of products and services offering environmental performance.

50%

Reduction by 2030 in CO2 emissions.
Net zero emissions by 2040*

50%

Reduction by 2030 in CO2 emissions.
Net zero emissions by 2040*

* From 2019 baseline levels.

Sustainability in ink

Minimizing operational impact

We are setting ambitious goals across our facilities to optimize our operations, reducing carbon footprint, reducing energy consumption, water and waste, and increasing use of renewable energy.

Progressive product development

We are driving innovation in inkjet ink technology to support customers in achieving their sustainability goals. Our research and development teams are working on inks for the future, expanding our technology portfolio to enable the creation of safer, more sustainable products.

Partnerships for progress

Through collaborative approaches with customers, suppliers, technology partners and the industry, we are developing more sustainable solutions, from ink design to production and supply, and the reuse or recycling of print.







Partner with the experts in **inkjet**

Our experts can advise on how Fujifilm ink solutions can deliver the best performance and profitability for your print system development.

Visit our website to get in touch.



FUJIFILM Ink Solutions Group



@FujifilmInk



fujifilmink.com

FUJIFILM
Value from Innovation