

# A strategic partner for your drug delivery breakthroughs

Healthcare solutions

Several factors are driving today's drug delivery market. This includes the increase of chronic diseases, the aging population, the rise in biologics, the shift towards homecare (with the subsequent urge for self-administration devices and portable solutions), and the growth toward more data-driven healthcare.

At Flex, we have the expertise and capabilities to help meet current drug delivery device demands and stay up to date with the latest market trends.

**20+**

Years of experience in design & manufacturing of drug delivery devices

**100+**

Drug delivery device concepts developed

**20+**

of the top global drug delivery companies are supported by Flex

**10M+**

Patients reached every year

Our design and manufacturing product experience includes:

Autoinjectors

Inhalers

Pen injectors

Infusion pumps

Wearable injectors

Connectivity modules

## Accelerate time to market with our reference design platforms

Leveraging our innovation and building blocks, Flex drug delivery reference design platforms can accelerate and de-risk your product development process, while allowing for customization based on your requirements.



### Reference design platform to help you create a smart autoinjector

- Voice-activated user interface
- Low-power architecture
- Connectivity options and mobile app
- RFID reader for multiple cassette identification
- Disposable cassette with 1ml glass syringe



### Reference design platform to help you create a smart syringe

- Compatible with 1ml glass prefilled syringes
- BLE connectivity smartphones and gateways
- Integrated security protocols
- Shelf life > 4 years
- Optimized for cost
- Environment friendly

**WE CAN PARTNER AT ANY STAGE OF YOUR PRODUCT JOURNEY**

From concept to care, we can integrate capabilities and create synergies to deliver innovation to the market



Full development of a new device



Transfer design to manufacturing with regionalization



Advanced manufacturing & PCBA assembly



Supply chain optimization



Digital transformation, connectivity & product cybersecurity



Sustaining engineering & improvement of legacy devices



Forward & reverse logistics



Design for environment & circular economy

## Drug delivery project examples

### Project case 1:

Bringing an on-body drug delivery system from idea to reality



### Project case 2:

Duo epinephrine system concept: nasal spray and autoinjector



- **CHALLENGE:** Enable Injections approached Flex with a request to support large-scale manufacturing for the enFuse™ on-body drug delivery system, and develop the processes required to allow for rapid scaling of production.
- **SOLUTION:** Flex shared expertise in large-volume manufacturing as a consultant relationship and performed a full-scale design review to optimize manufacturability.
- **RESULTS:** Enable Injections was provided with the knowledge and confidence to ensure that the program could scale in the timeframes demanded by its customers.
- **CHALLENGE:** envision a next-generation epinephrine system used to treat life-threatening allergic reactions (anaphylaxis) caused by insect bites, foods, medications, and other causes.
- **SOLUTION:** The new system, referred to as Duo, enables users to manage their epinephrine therapy autonomously, but acts as a discreet companion device they're proud to carry.
- **RESULTS:** Leveraged a design-driven process to create an optimized system architecture and contemporary brand language to provide an ideal user experience. 2022, Bronze International Design Excellence Award winner.

## Why Flex?

Accelerate time to market while reducing R&D investments by partnering with Flex. We'll share our cross-industry expertise, knowledge, and experience in the design, development, and manufacturing of your drug delivery system. Our services can help you develop your product, scale to volume production and provide the supporting supply chain and forward/reverse logistics. Our global scale also provides regional presence so we can tailor our solutions to your product requirements.



Let's collaborate to create the extraordinary in drug delivery products

For more information, visit [flex.com/healthcare](https://flex.com/healthcare)



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Flex (Reg. No. 199002645H) is the manufacturing partner of choice that helps a diverse customer base design and build products that improve the world. Through the collective strength of a global workforce across 30 countries and responsible, sustainable operations, Flex delivers technology innovation, supply chain, and manufacturing solutions to various industries and end markets.