

Design and Construction of Your Future Facility³

Life Sciences & Chemicals



Exyte at a Glance

Bringing the future of technology to life

Exyte is a global leader in design, engineering and construction delivering high-tech facilities, plants and factories. With a history of more than 100 years, we have developed a special expertise in controlled and regulated environments.

We serve the most technically demanding clients in growth markets such as semiconductors, life sciences, and data centers. Our business is organized in three strategic segments – Advanced Technology Facilities, Life Sciences & Chemicals and Data Centers. In addition to this certain Regional Specific Business activities are conducted.



History of 100+ years



Special expertise in **controlled and regulated environments**



Serving the most **technically demanding clients**



Full spectrum of services from consulting and design to managing turnkey solutions

Advanced Technology Facilities Life Sciences & Chemicals



Semiconductor
Flat Panel Display
Photovoltaics
Batteries



Pharmaceuticals & Biotechnology
Food & Nutrition
Consumer Care
Specialty Chemicals

Data Center



Cloud Computing
Co-Location
High Performance Computing
Enterprise

We serve the most technically demanding clients across the full spectrum of services from consulting and design to managing turnkey solutions. Operating in more than 20 countries, Exyte is uniquely positioned to support clients locally and globally.

In 2018, Exyte generated sales of 3.5 bn euros, up from 2.4 bn euros in 2017 on a like-for-like basis, with around 5.600 highly experienced and motivated employees.

Exyte emerged from a re-grouping of the German-based M+W Group in 2018.

Visit us on our website to explore more: www.exyte.net



Client centric operations in **20+ countries**



Commitment to **Safety:**
"Incident Free Workplace" (IFW)



Sales of €3.5bn (2018)



"Around **5.600** employees (2018) - highly **experienced and motivated**"

Life Sciences & Chemicals

The Future Facility³ Custom-made. World-class. Turn-key.

Lean, fast and innovative - our comprehensive and unique range of services for our customers in the Pharmaceuticals & Biotechnology, Food & Nutrition, Consumer Care and Specialty Chemicals sub-segments is precisely tailored to global players as well as to innovative start-ups. We understand that their needs vary and strive to offer the best solution according to the customer's specific requirements.

Exyte provides added value solutions to the industry – from assessing the project feasibility through engineering works to executing a project in accordance with relevant standards and procedures.

Is it time-to-market that is important to you? Our integrated delivery model challenges the industry's benchmarks. This is where our strength lies: Our teams welcome the challenges of technology driven industries. We realize projects professionally, according to latest technical standards, on time and within budget.

"Our teams are passionate about new challenges, technologies, and horizons. Reinventing ourselves, being agile and global is part of our spirit."

François Abiven
President of Global Business Unit
Life Sciences & Chemicals



Services that Suit Your Needs

Large or small, simple or complex, Exyte has the multi-discipline capability to support and deliver your project. Our services have been developed around the needs of our clients. We pride ourselves on providing all services under one roof, enhancing collaboration between our engineers and optimal coordination between the disciplines. Whatever the location, our specialist engineers, architects, project and construction managers are focused on helping you to achieve your goals.

Exyte provides comprehensive regulatory cGMP and FDA compliance services including commissioning, risk assessment, validation, computer system validation and qualification through all phases of complex projects for life science plants and processes.

Full Spectrum of Services



With our depth of knowledge in full lifecycle project delivery, Exyte offers expert, individual consulting to our customers for new facilities or processes, scale-up and project feasibility.

Exyte specialises in fully integrated facility design service to deliver high-end equipment, plants, buildings and laboratories for the life science sector.

With practical and effective methodology we reliably provide an integrated structure to take a project from early planning stage to successful completion.

Exyte's Value Proposition

Client needs



Technical expertise



Speed & schedule



Cost target

Exyte's value proposition

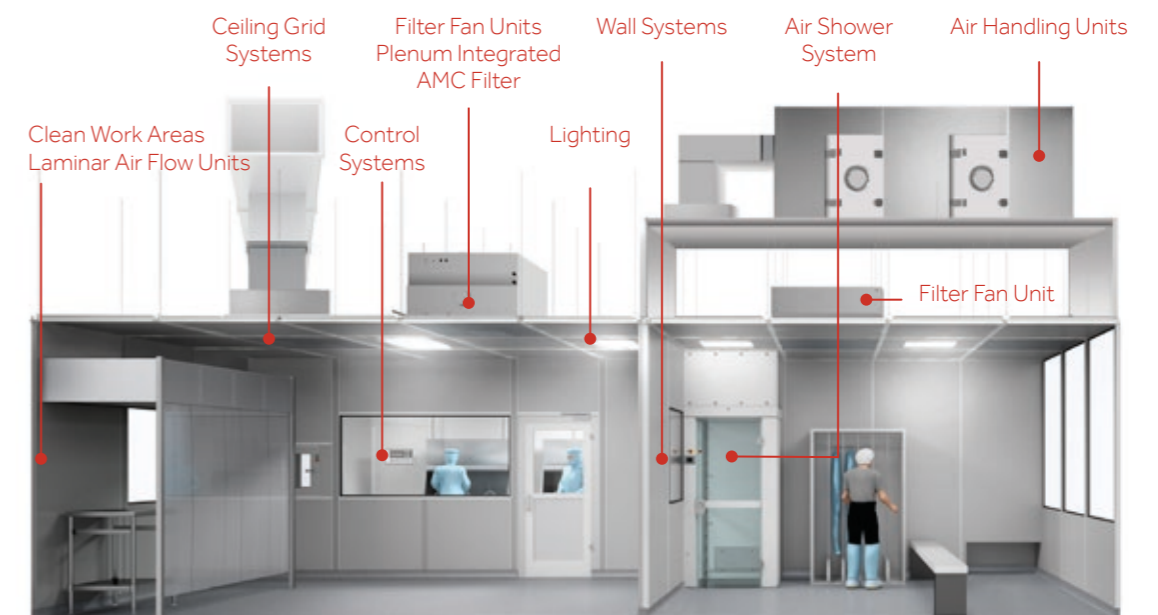
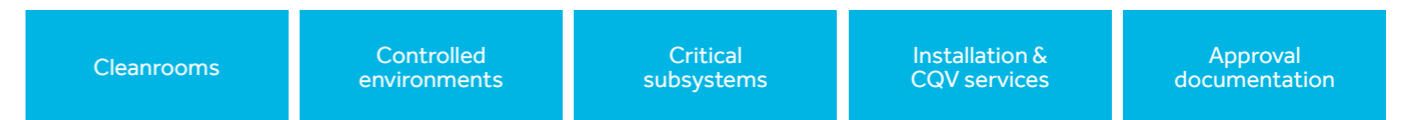
- Unmatched process know-how
- Leading in-house expertise
- Highly skilled and experienced field execution
- Expertise in cutting edge manufacturing technologies
- Strong understanding of related regulatory requirements

- Integrated delivery reduces project friction
- Contract flexibility allows for seamless execution
- Long-term relationships with clients result in a critical understanding of their needs
- Ability to trouble-shoot expediently

- Market leader with robust market data, cost information and subcontractor intelligence
- Project costs competitive and within clients' targets
- Ability to ring-fence costs once scope is established

Special Expertise in Controlled and Regulated Environments

50+ years of experience in ultra pure / clean air and sophisticated production environments ensure that manufacturing processes are productive, cost effective, clean, environmental friendly and safe.



Consulting & Planning

With our depth of knowledge in full lifecycle project delivery across the life science industries, we provide consultancy and planning services to customers on plant projects based on their needs and industry-specific requirements.

Our consulting services include:

- Site evaluations, feasibility studies and site master planning
- Benchmarking, process technology and equipment evaluation
- Environmental and sustainability studies
- Risk and life cycle cost analyses
- Process consulting, process optimization and cGMP consulting
- Process and facility simulation

Engineering & Design

Our global engineering network provides our customers with world class expertise in project planning and design for all engineering disciplines. With our background as a long-standing and experienced GMP design partner, we have the process know-how needed for the design of future-proof systems and areas.

Our design services include:

- Concept Design
- Basic Design
- Detail Design and 3D Planning
- Value engineering and cost optimization
- Supplier evaluation
- Building Information Modelling
- Authority submissions
- Facility and process system integration

Project & Construction Management

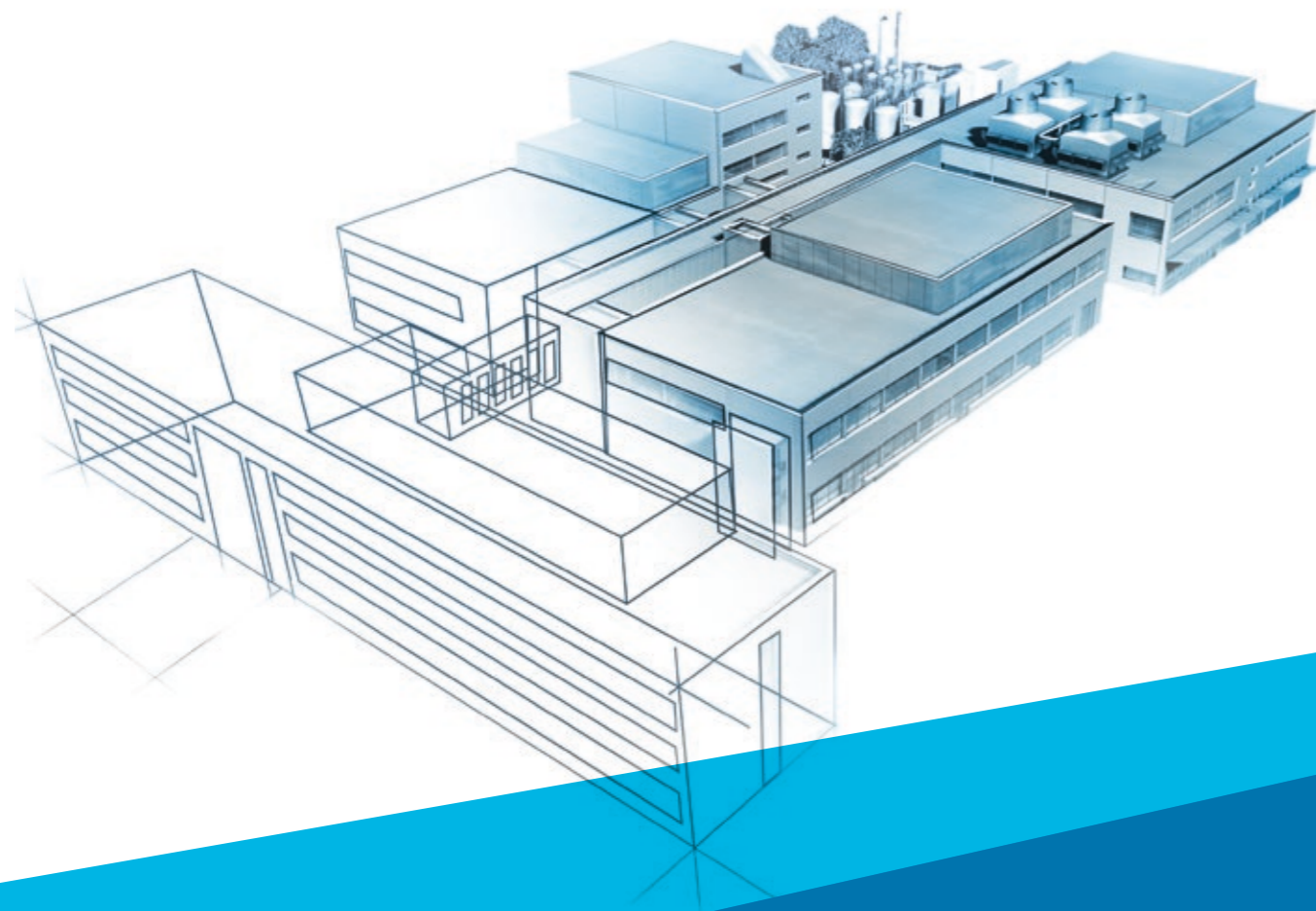
Early, accurate and comprehensive project definition and understanding is paramount to Exyte, and helps ensure successful project execution.

Our aim is to provide our customers with complete solutions. Further to design, this extends to construction and procurement management, including safety management, cost controlling, contractor supervision, start-up and commissioning.

Our team listens to fully understand your business and how your production site impacts and enables it. This level of collaboration creates an understanding that allows us to create the right solution for your needs.

Our implementation services include:

- Safety, Health, Environment and Quality (SHEQ)
- Project Management
- Procurement
- Construction Management
- Field Engineering
- Authority Management
- System and equipment commissioning



Commissioning, Qualification & Validation

We understand that innovative production methods and changing regulations make qualification and validation efforts an increasingly complex task. Being able to draw on the expertise of our highly qualified in-house personnel, we offer our customers qualification services for equipment and systems as well as comprehensive validation programs, ensuring full cGMP compliance.

Our scope of qualification and validation services:

- Risk assessment
- cGMP Consulting
- Validation Master Plan
- DQ / IQ / OQ
- Computer system validation (CSV)
- Methods and cleaning validation
- PQ and process validation support
- Technical facility management (TFM)

Modular Approach

Rightsizing capacity and greater flexibility are two of the leading trends shaping the landscape of manufacturing. There is a need for lean, adaptable facilities that can switch quickly between multiple products in multiple formats. Modular plant concepts can meet the growing need towards flexible production and enable new production networks.

Exyte applies modular construction techniques when designing and constructing complex high technology buildings and production facilities for the life science and chemicals industry. Our "Modularity in Design" solutions can help to support new demands more effectively when time-to-market is a critical project driver.

Benefits of prefabrication:

- Up to 25% shorter project duration compared with traditional construction methods
- Time saving due to module and trade manufacturing being carried out concurrently to site preparation and foundation construction
- Future extension of modular facility is more simple



Life Sciences & Chemicals Sub-Segments

With our strong experience in delivering integrated high technology process solutions and production plants Exyte's Life Sciences and Chemicals team focuses on providing optimum design and execution services. Experienced project teams develop and implement individual state-of-the-art solutions specifically for your process covering the entire GMP value creation chain.



Pharmaceuticals & Biotechnology

Exyte offers you services covering the complete GMP value chain from a single source. Whether our customers are planning a new facility or refurbishing an existing one, we ensure they are able to meet their operational goals and can bring products to market.



Specialty Chemicals

Exyte understands that quality deliverables are crucial to stay ahead in an increasingly competitive market. We serve our customers operating in this industry with a wide variety of services, including plant design, engineering, procurement and construction.



Consumer Care

Exyte is experienced in delivering customised fast track solutions for a wide range of consumer and beauty care production processes. Our expert teams support you when consumer demands and expectations are changing rapidly, realising your project within the shortest possible time to enable your products to reach the shelves as planned.



Food & Nutrition

Our highly qualified experts understand the relevant standards and regulations and know to apply them to individual projects. This includes for example regulations set out by the Food and Drug Administration (FDA) as well as the guidelines promoted by the European Hygienic Engineering and Design Group (EHEDG).



Life Sciences & Chemicals References (1/2)



**Roche Diagnostics
(Penzberg/Germany)**

Production building & laboratory: Design process and clean utilities, 3D planning of the complete plant for purification of antibodies and antigens to increase capacity of immunoassay production.



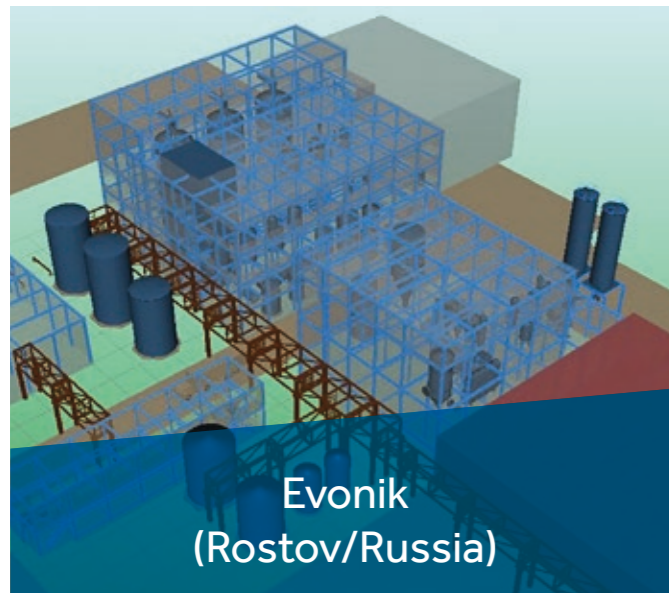
**Boehringer Ingelheim
(Biberach-Riss/Germany)**

New production plant for recombinant coagulation factors: Concept and basic design for the facility incl. utilities, production, freeze drying and filling, warehousing, logistics, QC laboratories.



**Mundipharma
(Singapore)**

EPC project for a new pharmaceutical production: Plant including a 3-storey pharmaceutical grade cleanroom for single use technology. Designed for further expansion to significantly increase production capacity of antiseptic products in future.



**Evonik
(Rostov/Russia)**

New biotechnology production plant for Biolys®: Basic Design (Process and CSA) of a new plant for 100,000 t/a of a feed additive, utilities, media-preparation, large scale industrial fermentation and large scale granulation system.



**Chr. Hansen
(Copenhagen/Denmark)**

Capacity expansion of starter cultures production: EPC, utilities, solid handling, FM mixer, mixing tanks, UHT, large scale fermenter, homogenizer, cryogenic tank, CIP, eluate, tie-ins to existing plant.



**CSL Behring
(Lengnau/Switzerland)**

New production plant for recombinant coagulation factors: Concept and basic design for the facility including utilities, production, filling and freeze drying warehousing, logistics, QC laboratories.

Life Sciences & Chemicals References (2/2)



**Leon-nanodrugs
(Munich/Germany)**

Modular mobile platform for nanoparticles in API production: EPC project, fast track development of the package during 6 months from basic design to delivery; capacity 100 Liter/batch.



**Beiersdorf
(Silao/Mexico)**

Design, procurement, construction, commissioning of main process equipment: Large scale mixers, bulk tanks, utilities, piping, vessels, DI-water, CIP-systems and raw materials.



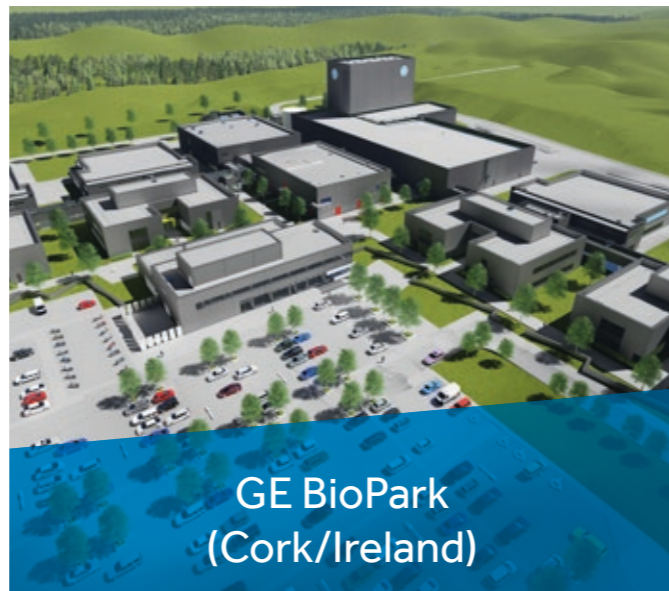
**Kantonsapotheke
(Zurich/Switzerland)**

Merge of two cantonal pharmacies: Management construction & fit out of building HVAC, all technical and cleanroom facilities class A-D.



**Confidential client
(Malaysia)**

Specialty Chemicals: EPC, greenfield plant, industrial chemistry biotech project.



**GE BioPark
(Cork/Ireland)**

Bio-Pharma Campus 42,000m²: EPC project, incorporating four independent prefabricated modular SUT MAB production units (each 2,500 m²).

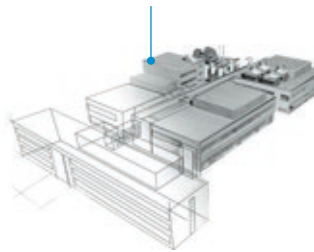


**Athenex
(Dunkirk, New York/USA)**

Design and construction of a new greenfield production site incl. warehousing and laboratories for oncological products.

The Spirit of Exyte

Bringing the future of technology to life



Agile mindsets

Pioneering spirit

Technology facilities

Improving life

Client-centric

Exyte Group

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