The world is our worksite
Engineering, Automation, Validation, and Project & Construction Management

SNC-LAVALIN  www.snclavalin.com
We deliver **GLOBAL** engineering and construction projects **FASTER** with practical **PROJECT CONTROLS** under **ONE** single point of responsibility.
Global Reach:

- Quebec, Canada
- Ontario, Canada
- Philadelphia, USA
- Mumbai (Bombay), India
- Seoul, South Korea
- Brussels, Belgium
- Lyon & Paris, France
- Barcelona, Spain
- SLI International and Procurement
  - Beijing and Shanghai, China
  - Kuala Lumpur, Malaysia
  - Jakarta, Indonesia

(Order does not infer priority)
FASTER PROJECT DELIVERY

- Proven “FAST TRACK” Expertise
- Efficient and Cost Effective Delivery
- Streamlined Project Management
- Experts in Complex Planning & Phasing
- Built-In QUALITY
<table>
<thead>
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<td>Study</td>
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<td>Study</td>
<td>Engineering</td>
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<td>Procurement</td>
<td>Construction</td>
<td>Start-up</td>
<td>Commissioning and Operation</td>
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**Project Management**

- **Capacity to influence project costs**
  - Project risk

**Construction Management**

- Costs for change
- Financial claims issued
- Project recurring costs
- Training costs

**Operations Management**

- Operating expenses

**Studies & Expert Reports**

- Cost of capital

**Actual Spending plus Contingencies**

-25% to +75%
-20% to +60%
-15% to +40%
-10% to +20%
-5% to +10%
PROJECT CONTROLS
PROJECT MANAGEMENT SYSTEM: PM+

PROJECT INITIALIZATION
- Parameters
- Coding structure (WBS, budget, documents, contracts, ...)
- User access to project

PLANNING & SCHEDULING
- PRIMAVERA
- Interface with PM+

ESTIMATING
- Detail estimate (WBS, commitment packages)
- Value engineering
- Multi-currencies

INTERNAL MANDATE
- Monitoring of EPCM services (including performance analysis)
- Monitoring of commitment package schedule
- Change control

CORPORATE REPOSITORY
- Reference tables
- Templates
- System access & security

CONSTRUCTION
- Contract administration
- Construction progress
- Deficiencies tracking
- Commissioning (definition & tracking)
- Tie-Ins monitoring

COST CONTROL
- Budget monitoring
- Trend analysis (scope, changes, ...)
- Commitments and forecasts
- Invoices & payments
- Currency management

DOCUMENT CONTROL
- Internal and external documents
- Transmittals
- Document status and history
- Tracking & follow-up

ENGINEERING
- Purchasing
- Contract formation & administration
- Inspection, expediting & logistics
- Site material management
- Material / equipment definition & follow-up
- Interface with engineering tools (PDS, REBIS, ...)
- Material requisitioning

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PROJECT CONTROLS
PROJECT DOCUMENT MANAGEMENT SYSTEMS

- Publishing - Access via Web Browser
- Controlled Coding Structure
- Redlining Review
- Document Integrity
- Powerful Workflow Capability
- Full Text Search Engine
PM+ GLOBAL ACCESS

SNC-Lavalin telecommunication’s map

Internet Infrastructure

ISP provider A
Central Office (CO)

ISP provider B
Central Office (CO)

SNC-Lavalin Firewalls

DMZ

SNC-Lavalin Firewalls

SNC-LAVALIN NETWORK
ONE POINT OF RESPONSIBILITY

- Single Source Accountability
- Clear Organization and Procedures
- Experienced Planning & Detailed Scheduling
- Optimize Use of Key Performance Indicators
- Built-in Sense of “URGENCY”
We deliver **global** engineering and construction projects **faster** with practical **project controls** under one single point of responsibility.

### FEATURE PROJECTS

<table>
<thead>
<tr>
<th>Project</th>
<th>Description</th>
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</thead>
</table>
| CRUCELL, SOUTH KOREA | New Vaccine Manufacturing Facility  
  - Scope: Fast Track, following 5 distinct phases: Conceptual Study, Basic Design, Detailed Design, Construction, and Validation / Compliance  
  - Building, processes & utilities |
| POLYPEPTIDE LABORATORIES, INDIA | Manufacturing Facility  
  - Project API - Peptide  
  - Scope: Civil, Architectural, Utility Equipment, Electrical, Instrumentation, HVAC, Piping & Construction Supervision  
  - Designed for FDA Approval |
| GSK BIOLOGICALS, BELGIUM | Quality Control Facility  
  - Total area of approximately 110,000 m²  
  - Scope: Basic and detailed design, Procurement, Construction Supervision, Project Management & Validation.  
  - 9,000m² of laboratory space |
| SANOFI PASTEUR, USA | Biopharma - Site Support  
  - Long term site services for Operational Support Projects  
  - Scope: Validation, Engineering, and Compliance  
  - Multiple Buildings including Vaccine production and ancillary operations |
| GENZYME, FRANCE | New Biomanufacturing Facility  
  - The total area of the facility is approximately 30,200 m²  
  - Scope: 5 phases of the EPCMV package: BOD, preliminary design, detailed study, construction, commissioning and validation  
  - Building, processes & utilities |
| SEPTODONT - NOVOCOL CANADA | Sterile Manufacturing Facility  
  - Phase I, Phase II, & Phase III Expansion Projects  
  - Scope: facility and utilities design, process equipment coordination, construction supervision, start-up, commissioning & validation |
# SAMPLE PROJECT EXPERIENCE

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<thead>
<tr>
<th>Client</th>
<th>Location</th>
<th>Project Details</th>
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