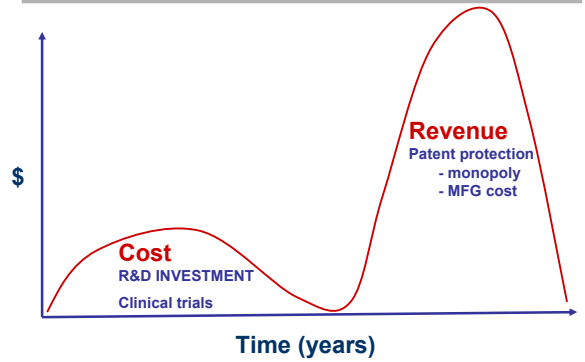


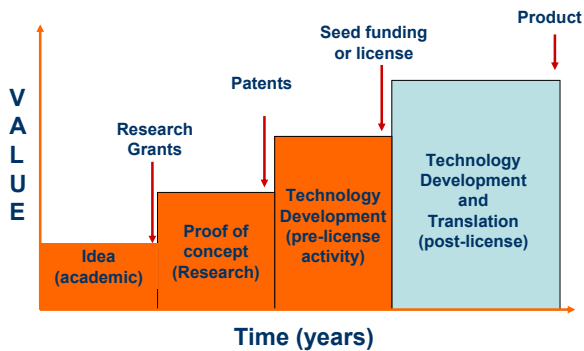
Some concepts for developing a local biotechnology business infrastructure

Boro Dropulić, Ph.D., M.B.A.
 Founder, VIRxSYS Corporation
 &
 Adjunct Assistant Professor in Oncology
 The Johns Hopkins University School of Medicine
 boro@jhmi.edu

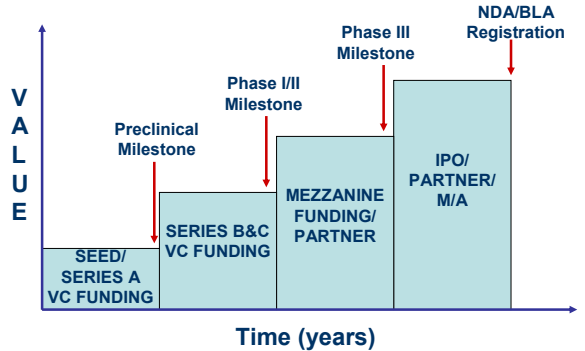
Biotechnology product cycle model



Research translation & Development



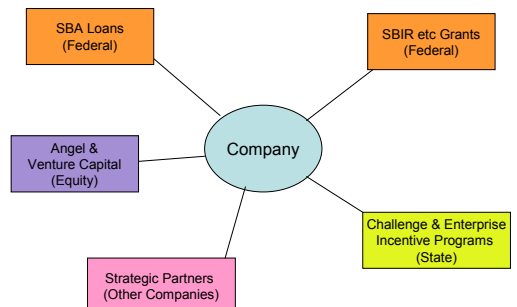
Companies need to build Value



Components for a successful environment for biotechnology



Sources for financing for biotechnology companies (Maryland, USA)





State and Federal Funding Opportunities

Lab to Market Symposium

September 1, 2004



Enterprise Investment Fund

Emerging High Technology Companies

Seeking \$1,000,000 or private equity capital

Patented or proprietary products

- Biotech
- Telecommunications
- Information technology
- Life Sciences
- Advanced Materials



Enterprise Investment Fund

The Deal

- Enterprise can invest \$150,000 to maximum of \$500,000
- Form of investment:
 - Equity-common/preferred
 - Convertible debt
- Term of no more than 15 years



Evaluation Criteria

- Technology
- Management
- Market Size
- Competition
- Economic Development



What does the competition look like?

Case Study – Wuxi, CHINA

Wuxi New District (WND) Investment Environment Presentation



Where is Wuxi?



History: 3,000 yrs+

Area: 4,787 km²

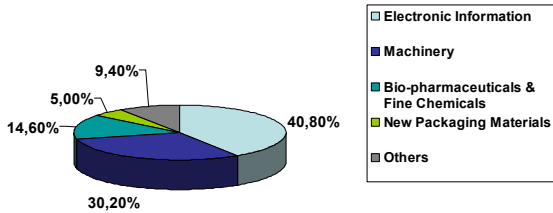
Population: 4.35 million

Accomplished in 10 years!

Quick Facts of FDI in WND

- Total foreign investment by 2003: US\$12 billion
- Fortune 500 companies: 40(53 projects)
- Total paid-up capital in 2003: US\$ 1.04 billion
- Total import & export value 2003: US\$ 7.42 billion

Relative strengths and positioning of Wuxi-China



Infrastructure provided by Wuxi for locating companies

Utility	Infrastructure	Rates
	Part of East China Power Grid ; Total 750,000 KVA; One 500KV, Two 220KV, Six 110KV, Two 35KV Substations; one 40,000KVA power plant; 10KV transformers (8000KVA each) are located evenly	RMB 0.507 per KWH (1-10kv)
	A daily capacity of 300,000 tons clean water; Φ200mm-Φ300mm pipe line have been laid to the site border;	RMB 2.7 per ton
	Three wastewater treatment plants in WND; A daily capacity of 50,000 tons in operation	Charge Included in the water rate
	Two Steam plants in WND; Capacity of 200 tons	RMB 115 per ton
	Pre-laid natural gas network to the land site, West to East Natural Gas Project	RMB 2.1 per cubic meter
	Phone services(Local/DDD/IDD/CIP), Internet services(ISDN/ADSL/FTTX-LAN/Fibre Optic)	The prices are subject to different service and configurations

Can Croatia learn from others?

What Does Wuxi do to Differentiate itself from Other Technology Centers?

✦ Strategic Location

--Transportation Hub in East China



Wuxi – Direct Access to Regional Economic Centers



A workforce that is willing and able

- Quantity
 - TTL employment: 2.16 m (943,900 are in MFG sector)
 - Over 180,000 professional engineers & technicians
 - 25,000 persons pour into workforce each year
- Quality
 - 95% of the employees with 9 years of compulsory education
 - High rate of localization
 - Stable, earnest to learn, disciplined and cooperative
- Training facilities & system
 - More than 30 technical schools in Wuxi
 - Sino-Germany Senior Professional & Technical Training School
 - Wuxi Professional College of Science & Technology



Sophisticated Government Service System to promote investment

- Service-oriented government staff
- One-stop service through start-up, construction and operation
- One fee-collection office, “0” administrative fee zone
- Legal consultative committee engaging in practice
- Association of Foreign Invested Enterprises (AFIE)
- WND Int'l Advisory & Consultative Annual Meeting
- Relocation services for expatriates

Quality of Life – do not underestimate the importance of this to recruit the best

- One of the top 10 resort cities in China
- Overseas Tourists in 2003: 480,000



Quality of Life – cont.



Can Croatia create a competitive biotechnology industry? - YES

- **Strategic location** – gateway to central and eastern europe
- **Highly educated workforce** – need to promote high tech training
- **High quality of life** – opportunity to promote this so to retain and recruit highly competent people
- **Government involvement** – active policy needs to be implemented to promote and support a local biotechnology industry
- **Infrastructure needs development** – incubators, “spin-offs”
- **Specific competitive strengths need to be determined and fostered**