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# Industry and Education: Meeting Each Other's Needs

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# Dr. and Mrs. Slee

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# Dr. Slee's early days

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- Dr. Slee worked for Dr. George Miller Sternberg (considered the first bacteriologist)
- Sternberg was appointed the Surgeon General of the US Army (1893) and he sent Dr. Slee to the Pasteur Institute in France to investigate Glycerinated Smallpox Vaccine
- Sternberg was very impressed with Slee's report of the vaccine and he encouraged Slee to establish a private laboratory to manufacture the vaccine

# Dr. Slee's early days

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- Around the same time, Slee contracted Cholera and came to the Poconos to recuperate.
- He stayed at the Swiftwater Inn and established a private practice there
- Slee married Ella Maginnis (innkeeper's daughter)

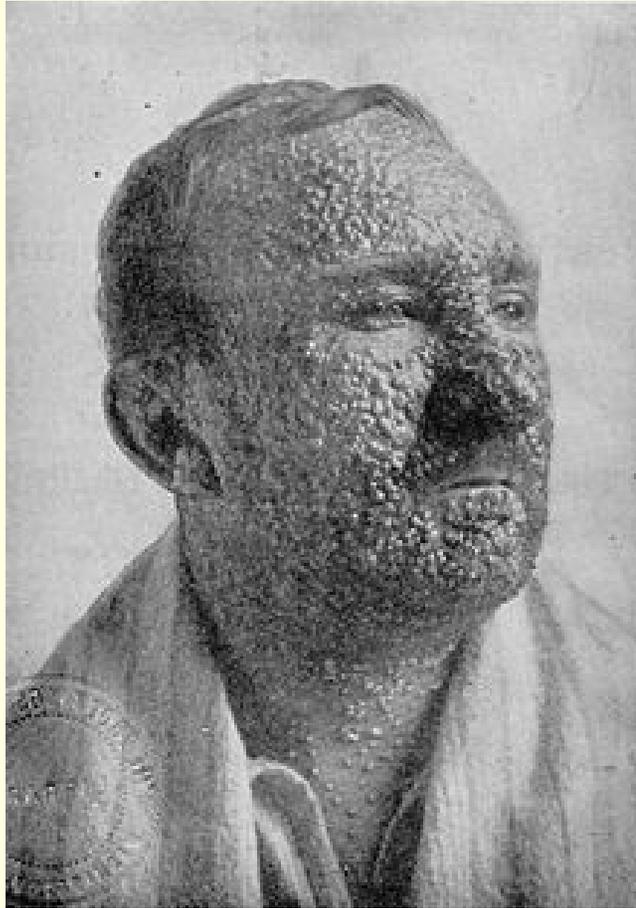
# Dr. Slee's early days

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- Ella inherited 4.3 acres across the street from the Swiftwater Inn and Slee constructed their home and the first laboratory building on the property in 1897
- He named the facility, "The Pocono Laboratories"
- He received state board of health certification that year and began producing Glycerinated Smallpox Vaccine. He called the product Vaccine Virus

# Smallpox

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Then...

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# Now...



B55 - VDL



B60 - US Comm Ops



B57 - Filling & Formulation



B56 - Meninge



B59 - Influenza

# History of Ownership

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- 1897 – Pocono Laboratories
- 1911 – Slee Laboratories
- 1930 – National Drug Company
- 1956 – Vick Chemical Company
- 1960 – Richardson-Merrell Inc
- 1970 – Merrell-National Laboratories
- 1978 – Connaught Laboratories
- 1989 – Pasteur Merieux – Connaught
- 1999 – Aventis Pasteur Inc
- 2004 – Sanofi Pasteur Inc

# Products in the early 20<sup>th</sup> century

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- Tetanus Antitoxin
- Veterinary Tetanus Toxoid
- Diphtheria Antitoxin
- Antimeningitis Serum
- Antistreptococcus Serum
- Normal Serum
- Vaccine Serum
- Anticanine Distemper Vaccine
- Antityphoid Vaccine

# Products Manufactured Today

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- Influenza Virus Vaccine
- Meninogococcal Vaccine
- Yellow Fever Vaccine

# Influenza manufacturing

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- 1970 – 25,000 eggs/day  
approximately 5 million doses per year
- 1971 – 50,000 eggs/day
- 1972 – 75,000 eggs/day
- 1978 – 125,000 eggs/day
- 2008 – 300,000 eggs/day
- 2009 – 900,000 eggs/day  
more than 100 million doses per year

# Employees

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- 1897 – 2 employees
- 1932 – 30 employees
- 1977 – 150
- 1978 – 110
- Today – 2400 permanent employees  
400 temporary employees  
300 contractors

# Contributions to World Healthcare

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- Eradication of Smallpox
  - The last naturally occurring cases of smallpox (*Variola major*) was diagnosed in 1975, (*Variola minor*) was diagnosed on 26 October 1977
- Greatly reduced the incidence of Diphtheria, Tetanus and Pertussis (Whooping Cough)
- Capable of manufacturing >100 million doses of Influenza Vaccine annually
- Commitment to eradicate polio within this decade

# Sanofi Pasteur Vision

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A world in which no one suffers or dies from a vaccine preventable disease

# Footnote to History

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- When Richard Slee was 4-5 years old, his infant brother died of **Meningitis**
- William Fisher's father died from **Yellow Fever**

Vaccines to protect against these two diseases are manufactured by the Swiftwater Laboratories today

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# Need for Skilled Employees

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- Rapid recruitment
- Use of temporary agencies to fill gaps
- Expedited training programs
- Need to simulate high-tech jobs outside of the actual work environment
- Require a location where we can show employees the consequences of doing something wrong

# Drawbacks to using Temps

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- When you rely on temp agencies, you don't always get the best candidates
- When you expend money to train temporary employees, you tend to hire them when permanent positions become available
- Results: you don't always place the best candidates in your full-time permanent positions

# Partnered with NCC

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- Intention was to develop a program that would augment our cleanroom training program
  - Send employees to NCC for additional cleanroom training
  - Seek new candidates from recent graduates
- Simulate cleanroom activities in a non-licensed facility
- Able to show employees the consequence of inappropriate actions without compromising our cleanrooms

# What can we do for each other?

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- Encourage community colleges to ask local businesses what they need
- Establish a point of contact between the college and area businesses
- Let them know what you already have available and ask their needs for the future
- Establish programs to educate the employees they already have making them more valuable for future assignments

# What can we do for each other?

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- Bring your programs to the employers
- Tailor specific programs to meet the needs of the businesses in your coverage area
- Offer classes at the business location to encourage participation
- Defer tuition payment until course is completed, if there is a company reimbursement policy
- Tailor course materials to the business need

# What can we do for each other?

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- Encourage local businesses to help fund or underwrite new course development
- Offer to train a number of employees free of charge in exchange for a funding commitment
- Develop pre-screening programs for potential applicants to assist in the hiring process
  - Help businesses develop “realistic job preview” videos
  - Establish pre-screening interviews

# What can we do for each other?

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- Look for ways that companies in your area can share temporary employees (certificate programs)
- Train employees for multiple functions so they are marketable to multiple employers
- Example: Internet distribution companies typically need seasonal employees from October to December to handle additional holiday orders. Resort industries typically need seasonal employees during the summer months.

# What can we do for each other?

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- Build a quality culture into your course offerings
  - If it's worth doing, it's worth doing right
  - Right First Time
  - Zero Defects
- Build a Safety culture into your courses
- Get students to start thinking of cost containment / cost reduction as a way of life

# What can we do for each other?

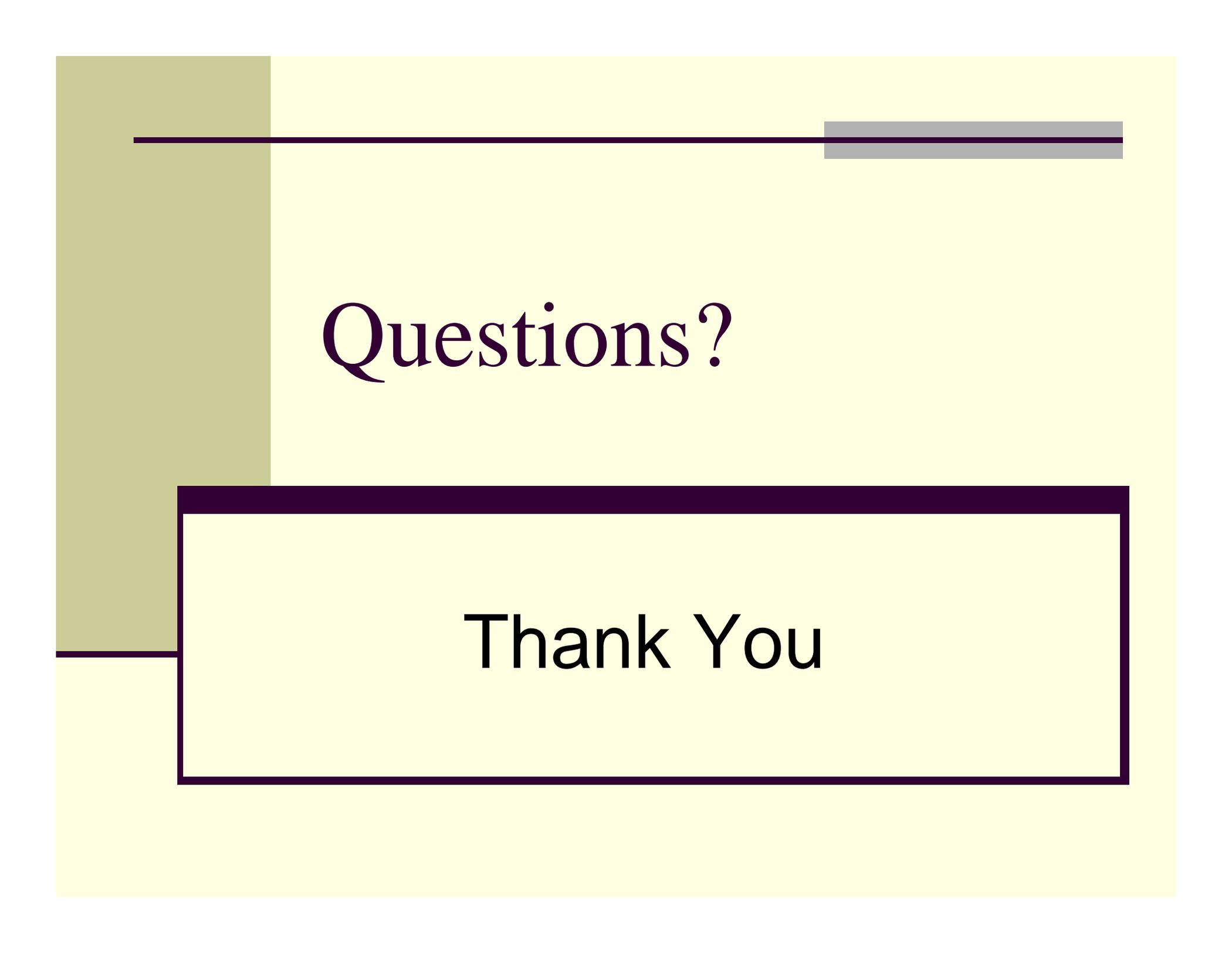
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- Find out which software applications local businesses are using
- Develop training programs for software applications
- Provide a basic understanding of MRP – Material Resource Planning
- Provide a basic understanding of Project Planning

# Conclusion

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- Be proactive: reach out to your local businesses
- Determine their needs
- Encourage them to seek you out as a solution to their problems
- Make sure they know who to call – Give them a name and face



Questions?

Thank You