COMPETITIVE AMERICA .US

Production Is Power

JOBS

The Exciting New World of Production

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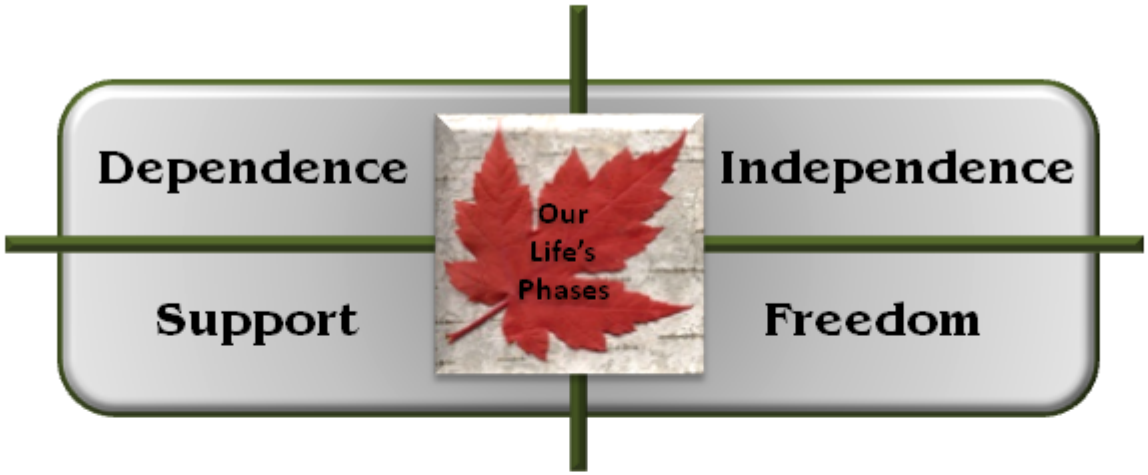

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An Industry and Education Initiative

Purpose: Define future job requirements in a disruptive economy and realign education to opportunities.

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Reason for job creation in America

American entrepreneurship

Superior education system

Improved standard of living in China and India results in higher labor costs

Reduced percent direct/labor resulting from automation

High cost of transportation

Abundant American energy resources

Environmental neglect by global competitors

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Situation

Job Vacancies

Current	**6 million**
Projected by 2020	**20 million**
Unemployed (Est. vary)	**13 million**

The skill sets of the unemployed do not match the skill sets needed by businesses

Job Vacancies from Dr. Gordon

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Situation

While manufacturing has the current and greatest focus, the problem is pervasive.

- **Manufacturing**
- **Construction**
- **Agriculture**
- **Service organizations**
- **Health care**

Literally everywhere that technology can be applied.

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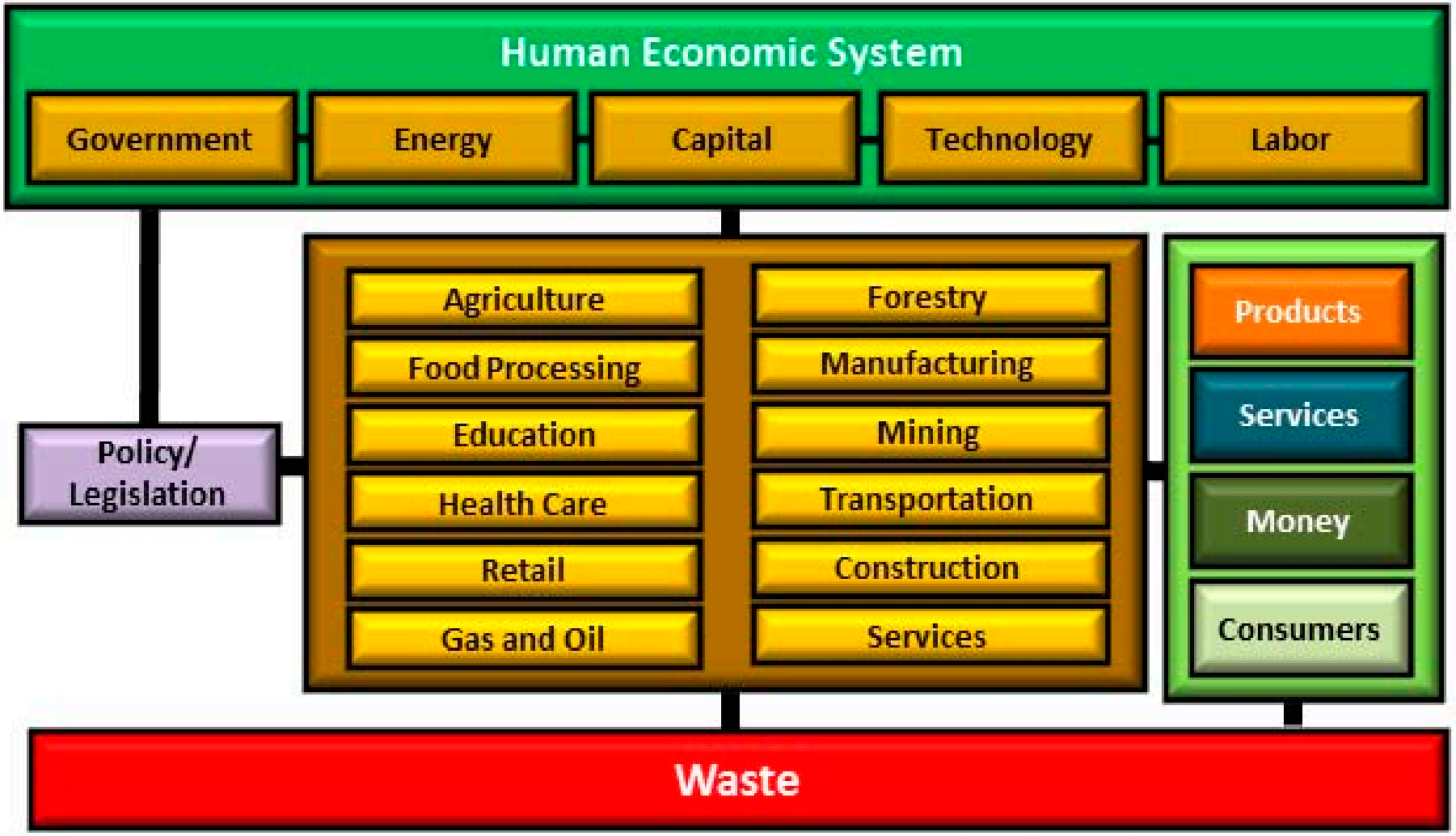

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Situation

The situation will worsen as 79 million baby boomers, many with critically needed skills, retire from work.

Business and education are at a crisis point, and the mismatch affects our standard of living and the very health of the national economy.

Figures from Dr. Gordon

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Situation

2007 – Dr. Gordon, author of "The 2010 Meltdown – Solving the Impending Jobs Crisis" and fifteen other books

The American work force will not sustain itself.

The requirement for high-skill, technologically savvy labor is increasing globally.

There will be a shortage of skilled labor to staff American factories and to repair Americas high tech tools and toys.

Dr. Gordon clearly communicates the dangers to our economic and cultural systems. He calls for immediate action to reverse the situation. His book contains the strategies to create a new paradigm and the methods to achieve it.

Note: Dr. Gordon's new book is Future Jobs, Solving the Employment and Skills Crisis"

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Situation

2008 – Richard C. Longworth, author "Caught in the Middle –America's Heartland in the Age of Globalization"

Once the center of America's industrial power, the future for mid-America in the global economy is dark and bleak.

Unemployment rates in the large mid-western cities are high and educational attainment is diminishing.

He postulates that every region of the world may be destined for the same negative future.

Regional groups may be the only hope to slow or reverse the escalating process of deterioration.

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Situation

Students entering college today will graduate in 2018-19. Degrees may be mismatched to opportunities before they graduate, if not already.

The next six years will end with major job destruction in all fields where automation can replace human effort.

Nearly all job creation, estimates range vary from 12 to 14 million jobs, will occur in small, highly automated businesses or startups.

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Situation

Many of the new jobs will pay very well, but require time to ramp up to higher pay.

Companies of any size, but especially small companies and startups, cannot gamble on performance, and they exercise great caution when hiring new people.

In a small business, new employees are like members of a family, and must share the same values and work ethic.

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Fourth Industrial Revolution Careers

The nature of work has changed forever

Standardization has given way to customization

The age of machines has arrived

New opportunities will largely center on cybernetic synergisms (human/machine interface)

Education will be the price of admission

Special training will differentiate winners and losers

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Fourth Industrial Revolution Careers

What has changed – Macro systems

Mental Energy
Technology, including Robotics
Information
Environmental Sustainability
Human Systems
Man/machine interface
New Energy Resources

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Fourth Industrial Revolution Careers

What has changed – Business

- **Proliferation of technology**
- **Changing work place**
- **Workplace safety**
- **Personal relationships**
- **Manager/employee relationships**
- **Commitment to quality**

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Fourth Industrial Revolution Careers

What has changed – Machining

- **Computer technology**
- **Machine precision**
- **Robotics**
- **Miniaturization**
- **Exotic, difficult to machine materials**
- **Products used in extreme environments**

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Fourth Industrial Revolution Careers

What has changed – Human

Integration of humans and machines into synergistic, highly intelligent, math and information based systems.

Sophistication of applied technologies in the real world of work.

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What is required

Employers of high-tech workers will invest a great deal of time and capital for development.

Employers demand passion and hard work in return.

If you expect to start at the top, find a different vocation. Higher positions must be earned.

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What is required

Employees in the new world of business need entrepreneurial skills and attitudes:

- **Technology training beyond “just information”**
- **Thinking skills / Problem solvers**
- **Mechanical aptitudes**
- **Continuous learning process**
- **Situational awareness/management**

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What is required

This situation requires employees who are:

- **Passionate about quality**
- **Willing to learn**
- **Willing to try again when they fail**
- **Innovative**
- **Reliable**
- **Self-starters**
- **Responsible**

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What is required

The first and worst question is:

“How much does it pay?”

The best question is:

“What do you need me to do.”

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A Failure to Take Appropriate Actions

The problems created by a changing workplace have existed for at least TEN years.

Some industries and educators in many demographic areas are ignoring the issue, or doing little or nothing to address them.

Others are forward thinking and their industries and economies are growing and creating jobs.

Doing nothing equates to failure.

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Solution

Industry has an obligation to communicate and work with educators.

- **Clearly define the needs**
- **Participate in GAP analysis - match capabilities to requirements**
- **Help define solutions**
- **Help fund the effort**

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Education

Develop synergist and common missions to provide students with viable future options and a pathway to get there.

Greater cooperation between universities and technical institutions.

Formal applied technology programs.

Continuing education bridge programs.

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Partnership

Educate students on the opportunities presented by the new industrial age.

Industry, education and government must be partners, but the burden falls on industry and education.