

Green Jobs Research

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LSU Energy Conference
Baton Rouge, Louisiana
April 21, 2010

Good News / Bad News

Good News

We are certain that “green jobs” are the answer!

Bad News:

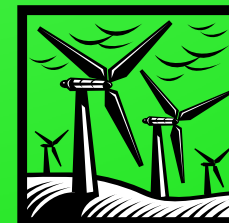
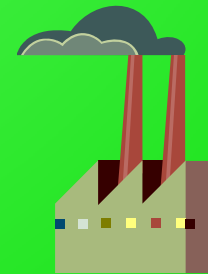
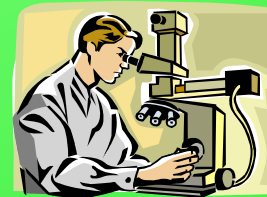
We’re not sure what the question is.

Depends on

- **Who you ask**
- **When**
- **For what purpose**

Green Coalition

Politics makes strange bedfellows:



Each has its own definition, agency and agenda

It was like déjà vu all over again.

Yogi Berra

Energy

- **Hubbert's Peak**
- **Jevon's Paradox**

Environment

- **Silent Spring - Rachel Carlson**

Jobs

- **Information Technology**
- **Biotechnology**

Trade-offs

- **New York City Sanitation Dept**

We have met the enemy and he is us.

Pogo

All of the above

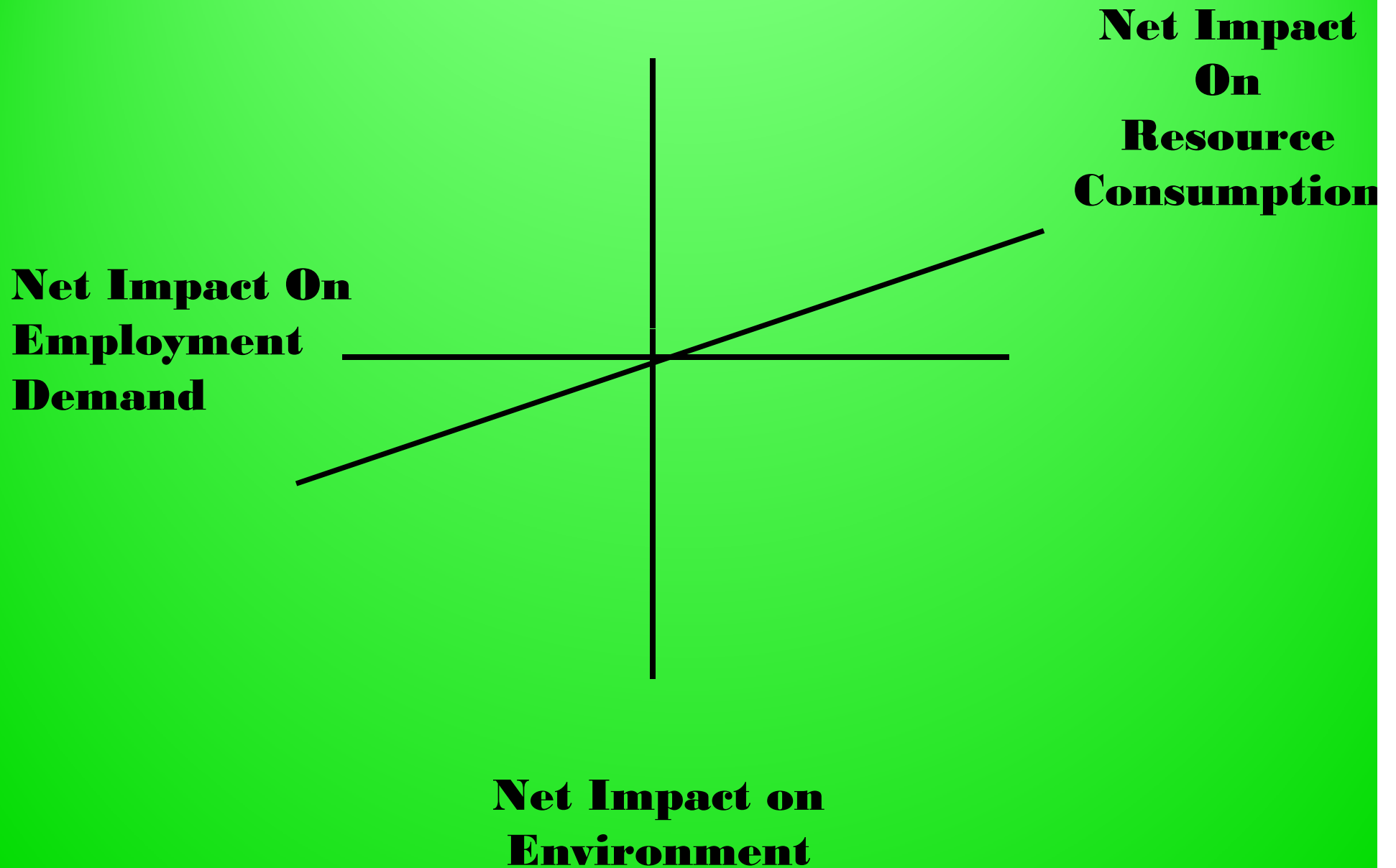
John McCain, 1st Presidential Debate Oxford MS

ISSUE OF GREEN

Means something different to everybody

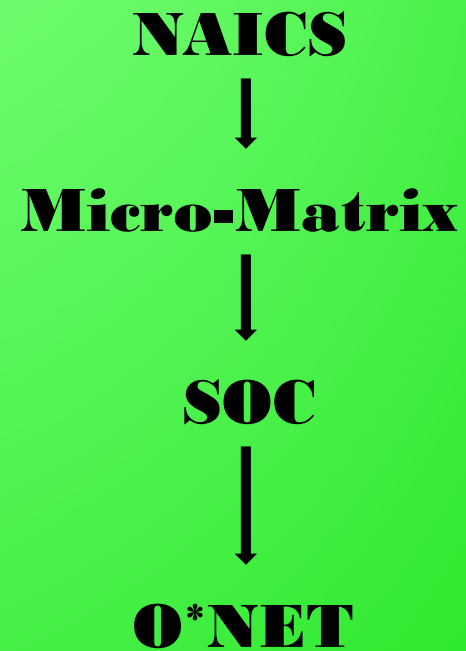
- **Broad themes**
 - **Resource Conservation**
 - **Environmental Degradation**
 - **Economic Growth**
 - **Profits**
 - **Jobs**
- **Coalition Building**
- **Policy Formulation**
- **Appropriations**
- **MIS**
- **Confounding Factors**
 - **Stimulus Dollars**
 - **Marketing**
 - **Recruitment**

What do we know anecdotally?



Attempted Definitions

- **Industry (Universe?)**
- **Firm**
- **Establishment**
 - **Project**
 - **Product**
 - **Process**
- **Occupation**
- **Job (DOT, role and context)**
- **Detailed Work Activities**
 - **KSAs**
 - **Tools & Technology**
 - **Frequency & Duration**
 - **Criticality & Proficiency**
 - **Crosswalks & Algorithms**



-
- Duties & Tasks
 - Work Environment
 - GWAs
 - DWAs

Bigger Picture: the DWA Project

- **Funded by the Texas Workforce Commission**
- **Looking at all 900+ jobs in SOC**
- **Reviewing and refining the work element descriptors**
- **High resolution, granular data**

USES OF THE DATA

Employer identified expected learning outcomes to drive

Skills Standards and Certification

Curriculum review, revision and development

- **Program, Module/Continuing Education, Coachware**
- **Enrollment Management/RPK**

More efficient labor exchange

Informed choice in career development

Research Methods

Web 4.0 Tools

Latent Semantic Analysis

- Tacit Knowledge
- Intelliflows

Virtual Global Focus Group

Delphi Technique

Ongoing Community of Practice

SMEs

Legacy Occupations

Incumbent workers

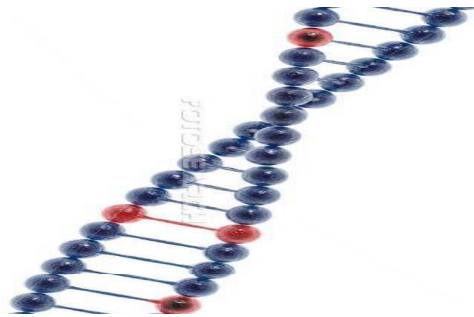
First line Supervisors

Hybrid and Emerging Occupations

innovators



DWAs - the DNA of Work



DWA's promote common learning content and talent interoperability across occupations

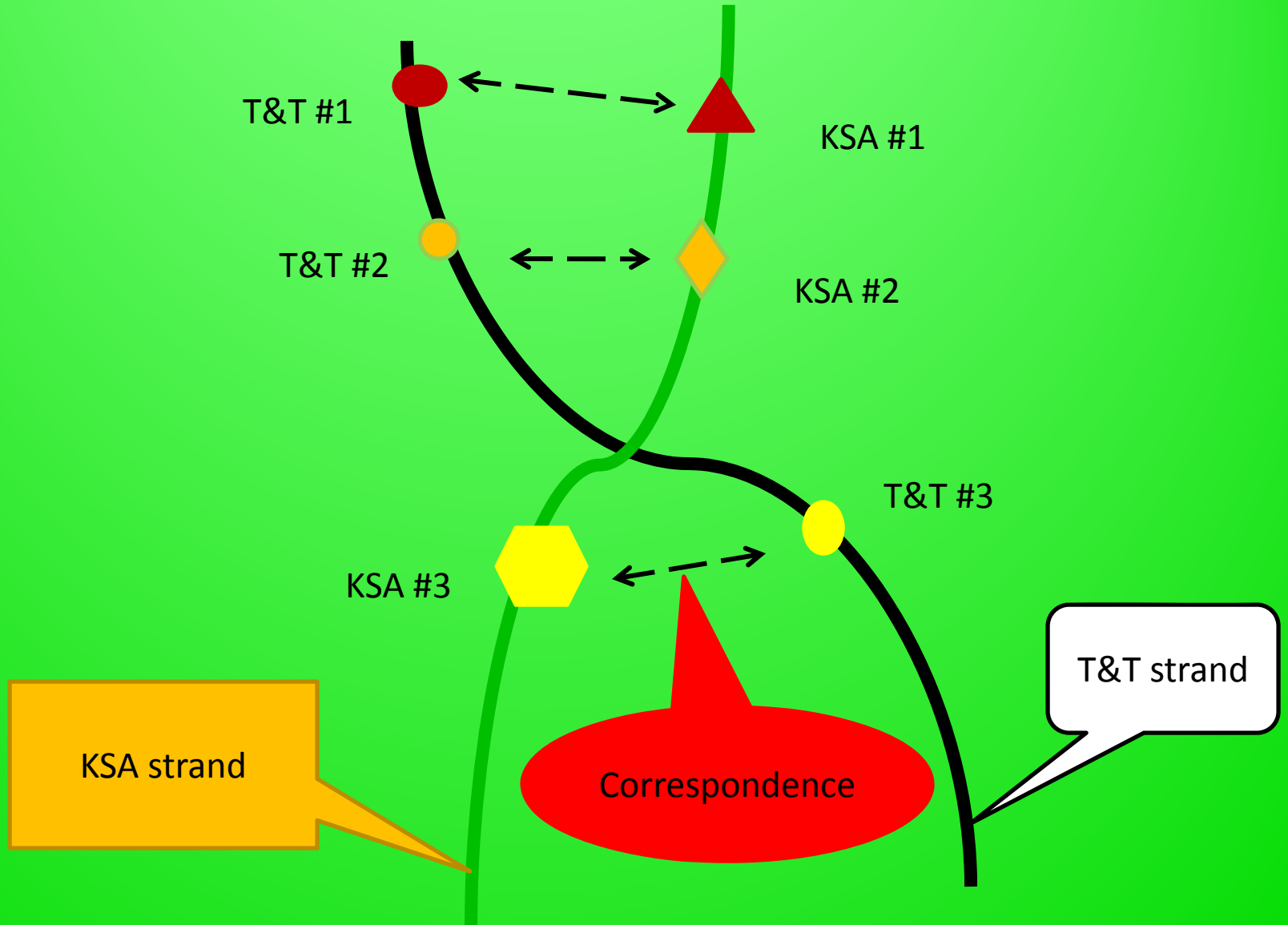
Economic Cluster

| Occ1 | | Occ2 | | | | Occ3 | Occ4 | Occ5 |
|----------|---------|---------|---------|---------|----------|----------|----------|----------|
| Job 1 | Job 2 | Job 1 | Job 2 | Job 3 | Job 4 | Job 5 | Job 1 | Job 1 |
| DWA 698 | DWA 431 | | | | | | DWA 1089 | DWA 57 |
| DWA 333 | DWA 810 | DWA 882 | | | | DWA 17 | DWA 109 | DWA 85 |
| DWA 1098 | DWA 980 | DWA 333 | | | | DWA 10 | DWA 27 | DWA 12 |
| DWA 650 | DWA 5 | DWA 9 | DWA 590 | | DWA 1089 | DWA 80 | DWA 660 | DWA 1020 |
| DWA 230 | DWA 109 | DWA 3 | DWA 109 | DWA 312 | DWA 109 | DWA 999 | DWA 333 | DWA 109 |
| DWA 1 | DWA 12 | DWA 777 | DWA 5 | DWA 290 | DWA 1000 | DWA 1222 | DWA 12 | DWA 601 |

Successful human capital growth builds on common connections.

Example: DWA 109 is shared by 4 of 5 occupations and 5 Jobs.

DWA Statement #N

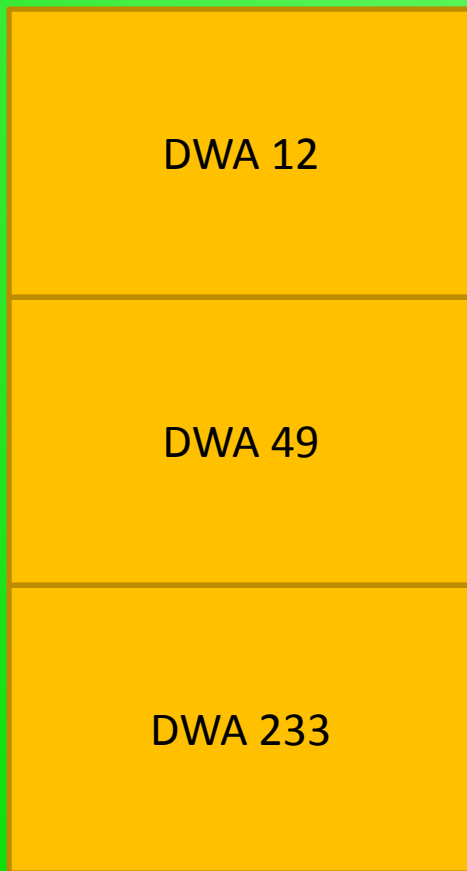


Findings at the DWA Level

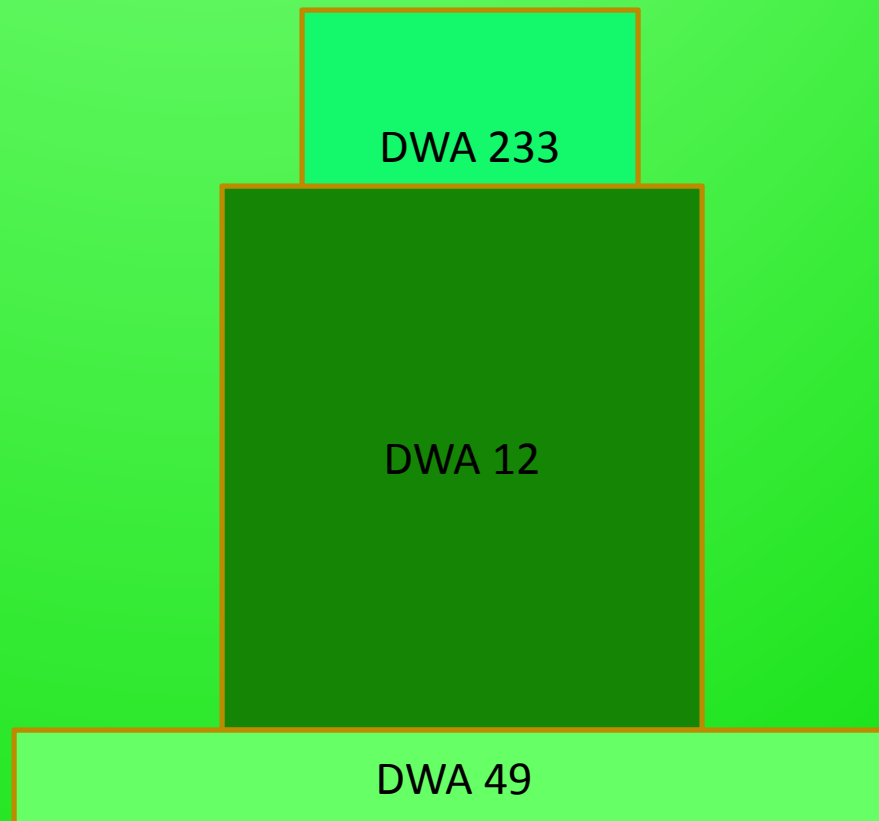
- **Greenness is inherent in the tools and technology used**
 - **Reduced carbon footprint (and other toxins)**
 - **Other resource conservation**
 - **Increased energy production from sustainable, less toxic resources**
- **Criticality of the DWA to overall work assigned**
- **Complexity and proficiency levels**
- **Frequency in the relative mix of duties and tasks**
- **Duration**
- **Location (labor shed, commute shed)**
 - **Macro (talent pool)**
 - **Micro (succession)**
- **Gap analysis**
- **Measured and scalable response**
 - **Recruitment**
 - **Training**
 - **Policy levers**

Adding Green Concepts

- Conventional



- Green



Greenness Configuration Model

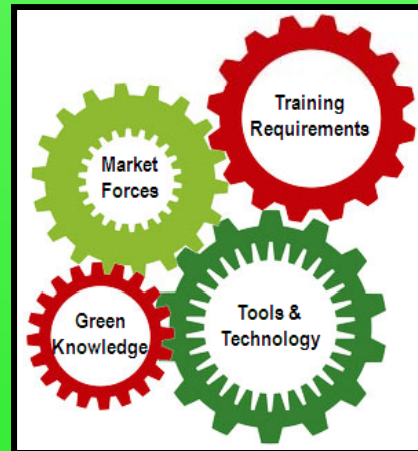
Current

Occupation
Job
DWA Library

DWA 1
DWA 2
DWA 3
DWA 4
DWA 5
DWA 6
DWA 7
DWA 8
DWA 9

DWA
Evaluation
Set

Computational Engine



Greenness
Attributes

Future

Occupation
Job
DWA Library

DWA 6
DWA 4
DWA 3
DWA 1
DWA 5
DWA 2
DWA 7
DWA 1
DWA 9

Traditional

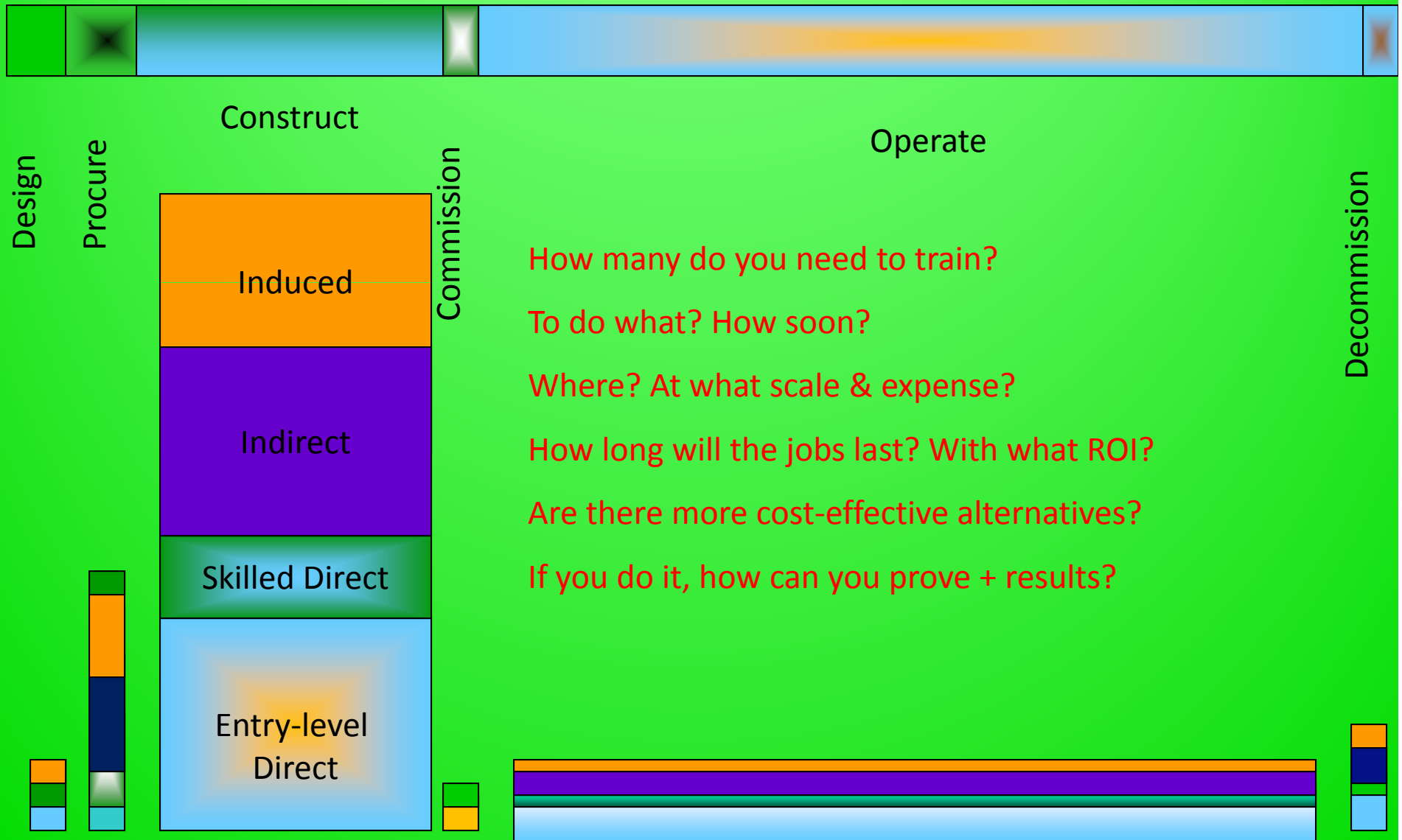
Green

Readiness
Intervention

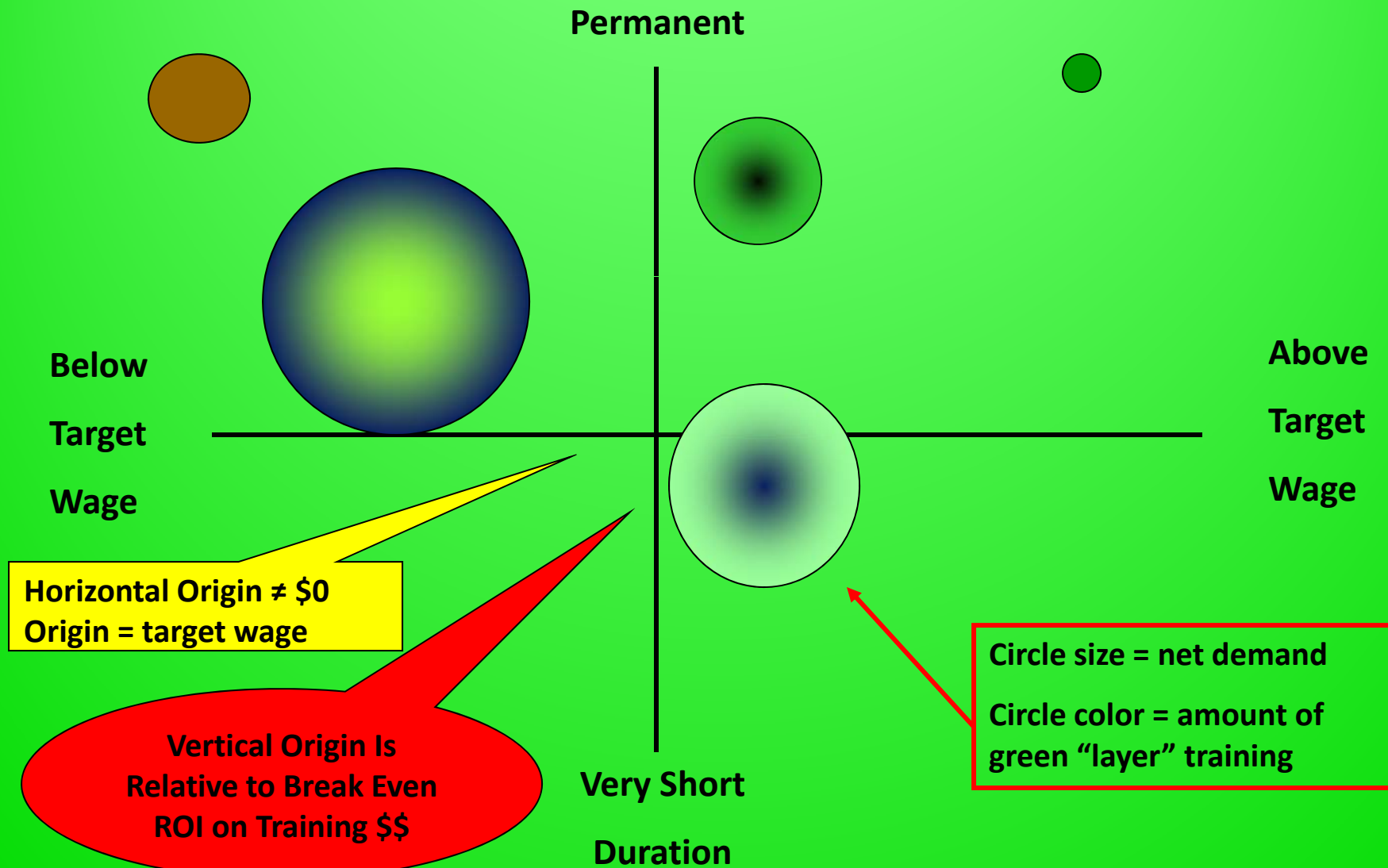
Bandwagon du jour

**Nanotech
Hydrogen Economy
Succession Planning**

The Detailed Answers Are Project Dependent and Phase Dependent



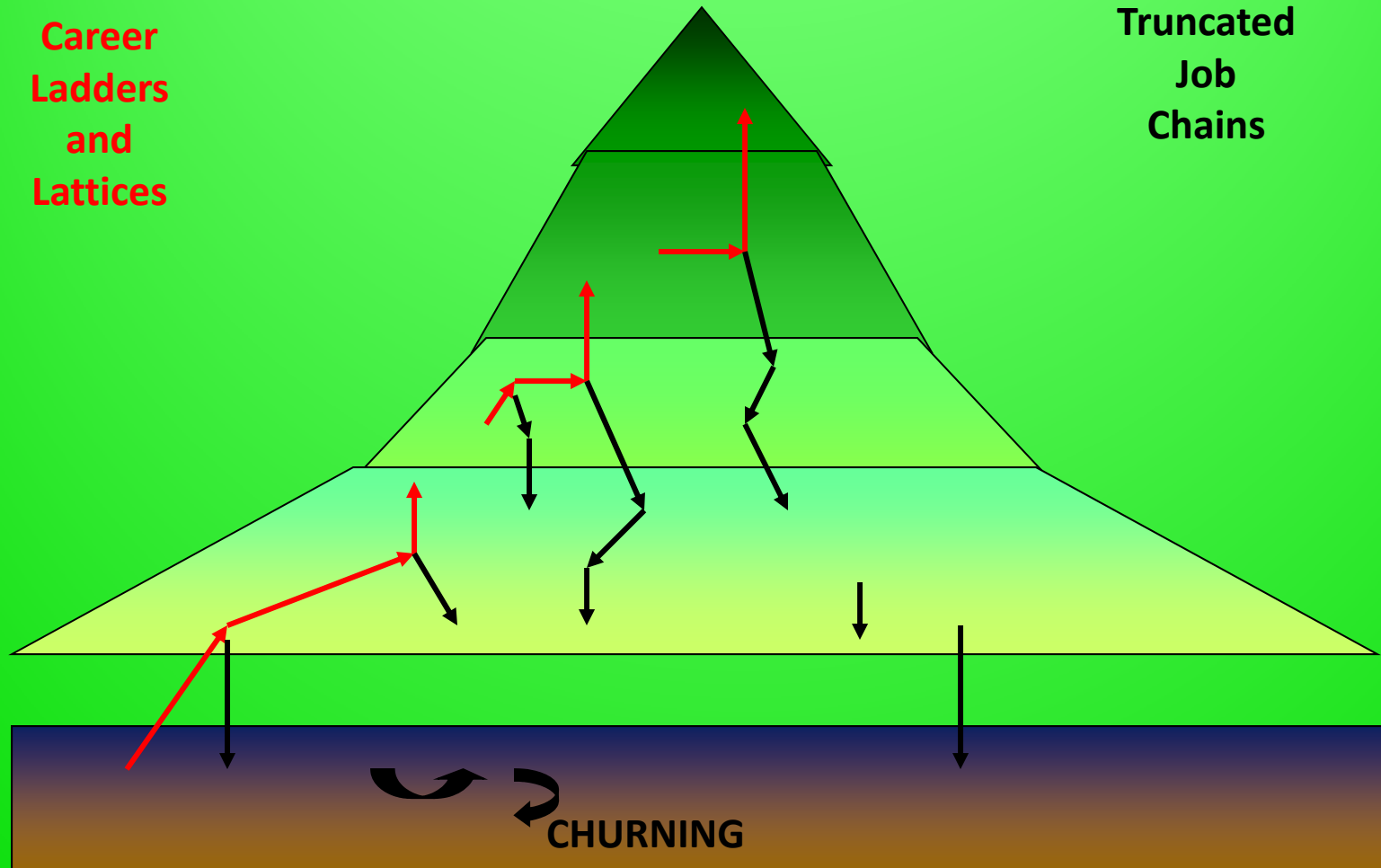
Bubble charts to sort choices: evaluating green employment demand



Who will be hired and when? Career Ladders and Lattices

Career
Ladders
and
Lattices

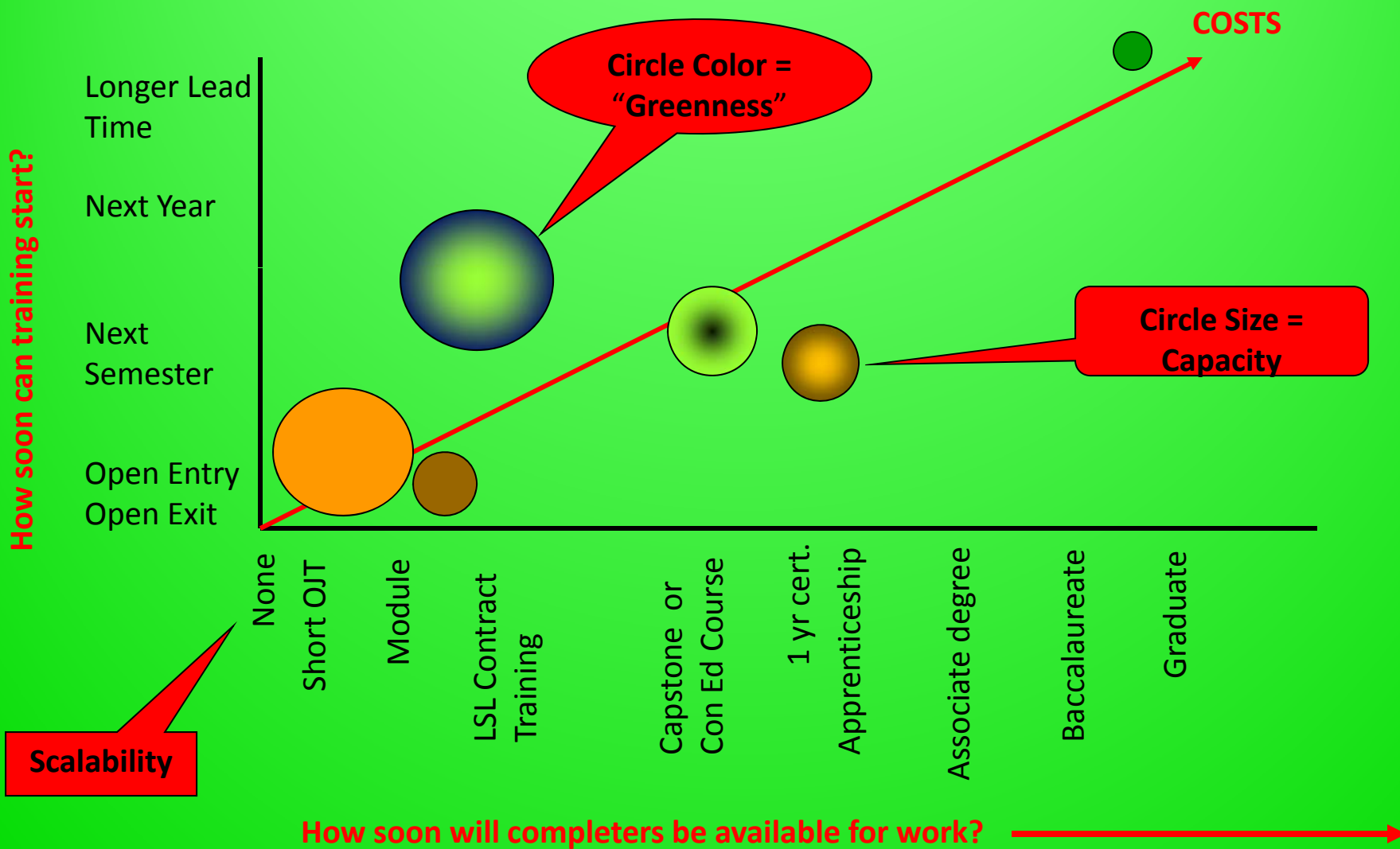
Truncated
Job
Chains



Andrew Sum: The Dual Labor Force

Bubble Chart #2

Weighing education & training options



Measured & Scalable Response

- More effective use of scarce training dollars
- Ramp up or down with market forces
- Transferability of skills approach to reemployment
- Collaboration
 - Smart grid (DoE, CenterPointe, UH Energy Research Park)
 - Healthcare IT
 - Conventional office jobs
 - NASA
 - FAA

In the operational phase of a green initiative, what does workforce need to consider?

- **Direct job creation**

Gross v. net

When & how long?

Will they be filled with locals? With At-Risk?

Labor availability > UI claimants

- **Ripple effects (I/O modeling of indirect and induced)**

- **Wages and benefits**

Davis Bacon (VP Biden's Middle Class Task Force)

Replacement wage for dislocated and trade affected workers

- **"Greenness"??**

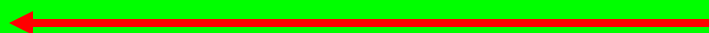
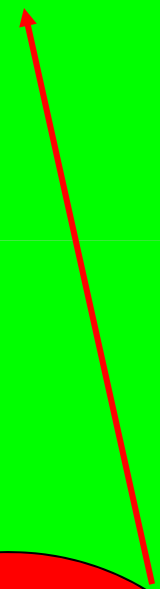
List/not listed

"Brushed by" green

Overlooked

Energy/Resource Conservation
Renewable Energy Production
Toxic Emission Reduction

Training?
Just-in-Time
Layering
ROI



Measures

- Placement rates

- Entered employment

- Welfare entered employment

Reduces

- average UI duration
- total UI payouts

- Green Enrollments

- “ITAs, Contract Training, OJTs

- Training-related placements

- Cost per/return on investment

Buyers' market *
Just-in-time * Davis
Bacon

- Longitudinal

- Employment retention/resilience

- Earnings gains

Surge &
Decline

Beyond Recovery

- Performance + ROI = Credibility & Support
 - Reauthorization of WIA
 - Higher appropriations for human capital investment
 - Sustainable economic growth
- Scalable & responsive education & training
- Employment resilience
- Boomer replacements
- Resources and Environment

Contact Information

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