Greater Twin Cities United Way presents:

The Leading Edge: Sector-Based Career Pathways

Sponsored by:

CLASP
 policy solutions that work for low-income people

#gtcuwforum

United Way

LIVE UNITED
The Leading Edge:
Sector-Based Career Pathways

November 7, 2013
Career Pathways Forum
St. Paul, Minnesota
Garrett Groves & Vickie Choitz
New Realities

EDUCATION, WORKFORCE & ECONOMIC DEVELOPMENT

I. There is increasing debate about a skills mismatch and stagnant job growth in our economy.

II. The United States is losing the international skills race.

III. The solution requires increased alignment and collaboration between education, workforce & economic development.
Even as the country experiences an unemployment rate of over 7 percent, companies consistently report that they cannot find the employees they need to fill certain jobs.

Source: ManpowerGroup, 2012
New Realities: Skills Mismatch

EDUCATION, WORKFORCE & ECONOMIC DEVELOPMENT

A third of employers never communicate with education institutions.

Source: McKinsey Global Institute, 2013
New Realities: Skills Mismatch

EDUCATION, WORKFORCE & ECONOMIC DEVELOPMENT

A third of education institutions can’t estimate their job placement rates; those that can often overestimate it.

Source: McKinsey Global Institute, 2013
New Realities: Skills Mismatch

EDUCATION, WORKFORCE & ECONOMIC DEVELOPMENT

By 2020, nearly two out of every three U.S. jobs will require some postsecondary education and training.
By 2020, nearly two out of every three U.S. jobs will require some postsecondary education and training.

Source: Georgetown Center on Education and the Workforce, “Career and Technical Education: Five Ways That Pay Along the Way to the B.A.”
High School-Educated Workers Represent a Decreasing Share of the Middle Class

(Middle class includes all workers with annual income between $35,000 and $70,000)

- 28% High school diploma
- 46% Some college/Associate’s degree
- 12% Bachelor’s degree
- 8% Master’s degree or better

Source: Georgetown Center on Education and the Workforce, “Career and Technical Education: Five Ways That Pay Along the Way to the B.A.”
I. There is increasing debate about a **skills mismatch** and **stagnant job growth** in our economy.

II. The United States is **losing the international skills race**.

III. The **solution requires increased alignment** and collaboration between education, workforce & economic development.
Skilled for Life?
KEY FINDINGS FROM THE SURVEY OF ADULT SKILLS
Survey of Adult Skills in brief

166 thousand adults...
Representing 724 million 16-65 year-olds in 24 countries/economies, including 5,010 Americans

Took an internationally agreed assessment...

in literacy, numeracy and problem solving in technology-rich environments.
Skills of adults

Numeracy

Japan
Finland
Netherlands
Sweden
Norway
Denmark
Slovak Republic
Czech Republic
Austria
Estonia
Germany
Average
Australia
Canada
Korea
England/N. Ireland (UK)
Poland
Ireland
France
United States
Italy
Spain

Score
Skills of adults

Literacy

- Japan
- Finland
- Netherlands
- Australia
- Sweden
- Norway
- Estonia
- Czech Republic
- Slovak Republic
- Canada
- Average
- Korea
- England/N. Ireland (UK)
- Denmark
- Germany
- United States
- Austria
- Poland
- Ireland
- France
- Spain
- Italy
Literacy skills in younger and older generations

- **KOREA**
- **Germany**
- **US**
- **Norway**
- **Finland**
- **Spain**
- **UK**

Average 16-24 year-olds

Average 55-65 year-olds
New Realities

EDUCATION, WORKFORCE & ECONOMIC DEVELOPMENT

I. There is increasing debate about a skills mismatch and stagnant job growth in our economy.

II. The United States is losing the international skills race.

III. The solution requires increased alignment and collaboration between education, workforce & economic development.
Sector Strategies Coming of Age:
EDUCATION, WORKFORCE & ECONOMIC DEVELOPMENT

I. Education

II. Workforce Development

III. Economic Development
Sector Strategies Coming of Age:
EDUCATION, WORKFORCE & ECONOMIC DEVELOPMENT

I. Education  
Train & Pray

II. Workforce Development

III. Economic Development
Sector Strategies Coming of Age: EDUCATION, WORKFORCE & ECONOMIC DEVELOPMENT

I. Education
   Career Pathways

II. Workforce Development

III. Economic Development
Career Pathways
Effective career pathways rely on coordination across education and training programs in order to offer a clear sequence of industry-relevant coursework and credentials to job seekers. Today's education and training programs include online and in-person opportunities.
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Career Pathways

Effective career pathways rely on coordination across education and training programs in order to offer a clear sequence of industry-relevant coursework and credentials to job seekers. Today's education and training programs include online and in-person opportunities.

After being in the workforce, a person may choose to go back for more credentials to make an upward or lateral career move.
Sector Strategies Coming of Age:
EDUCATION, WORKFORCE & ECONOMIC DEVELOPMENT

I. Education
   Career Pathways

II. Workforce Development

III. Economic Development

Career Pathway System
- High school (diploma or equivalent)
- Adult Basic Education (credential)
- Community college (degree or certificate)
- University (degree)
- Organized labor training, apprenticeship (certificate)
- Workforce training (certificate)
- Enter workforce in a variety of careers
- Enter workforce in a variety of careers
- Enter workforce in a variety of careers
- Enter workforce in a variety of careers
Sector Strategies Coming of Age:
EDUCATION, WORKFORCE & ECONOMIC DEVELOPMENT

I. Education → Career Pathways

II. Workforce Development

III. Economic Development → ?

Career Pathway System
- High school (diploma or equivalent)
- Adult Basic Education (credential)
- University (degree)
- Community college (degree or certificate)
- Organized labor training, apprenticeship (certificate)

Enter workforce in a variety of careers
Sector Strategies Coming of Age:
EDUCATION, WORKFORCE & ECONOMIC DEVELOPMENT

I. Education

II. Workforce Development

III. Economic Development → Business Attraction
Sector Strategies Coming of Age:

EDUCATION, WORKFORCE & ECONOMIC DEVELOPMENT

I. Education

II. Workforce Development

III. Economic Development → Business Attraction

(Tax Breaks for Big Firms)
Sector Strategies Coming of Age:
EDUCATION, WORKFORCE & ECONOMIC DEVELOPMENT

I. Education

II. Workforce Development

III. Economic Development  →  Industry Clusters
Industry Cluster
An industry cluster consists of large and small firms in a single industry. Firms in industry clusters benefit from synergies of association related to shared labor, sources of innovation, suppliers, markets, technology, and infrastructure.
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- **Large/Anchor Firms**
- **Small Businesses**
- **Start-ups**
- **Medium Firms**
- **Support Sectors**
- **Suppliers**

**MARKETS AND BUYERS**
Includes transportation, utilities, broadband, etc.

**SUPPLY CHAINS**
Includes access to university and federal lab research and development.

**INFRASTRUCTURE**
Includes education and training systems graduating jobseekers with skills for entry-level, mid-level, and advanced-level occupations.

**INNOVATION AND TECHNOLOGY**

**LABOR**

**NATIONAL GOVERNORS ASSOCIATION**
Designs by [The Woolsey Group]
Sector Strategies Coming of Age:
EDUCATION, WORKFORCE & ECONOMIC DEVELOPMENT

I. Education  Career Pathways

II. Workforce Development

III. Economic Development  Industry Clusters
Sector Strategies Coming of Age:
EDUCATION, WORKFORCE & ECONOMIC DEVELOPMENT

I. Education  Career Pathways
II. Workforce Development  
III. Economic Development  Industry Clusters
Sector Strategies Coming of Age:
EDUCATION, WORKFORCE & ECONOMIC DEVELOPMENT

I. Education

II. Workforce Development → Labor Exchange

III. Economic Development
Sector Strategies Coming of Age:
EDUCATION, WORKFORCE & ECONOMIC DEVELOPMENT

I. Education

II. Workforce Development → Sector Partnerships

III. Economic Development

Career Pathway System

Industry Cluster

Start up

Support Sectors

Medium Firms

Small Businesses

Large/Anchor Firms

Markets and Supply Chains

Infrastructure

Innovation and Technology

Labor
Sector Partnership
The partnership addresses common needs of employers and generates coordinated solutions that benefit workers.
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The partnership addresses common needs of employers and generates coordinated solutions that benefit workers.

Industry members
(Representatives from firms in a single industry)

Convener
Sector Partnership
The partnership addresses common needs of employers and generates coordinated solutions that benefit workers.

**Industry members**
(Representatives from firms in a single industry)

**Strategic partners**

- K–12
- Adult basic education
- Community colleges
- Universities
- Community-based organizations
- Human services organizations
- Organized labor
- Workforce boards, one-stops
- Economic development organizations
- Convener
Sector Partnership
The partnership addresses common needs of employers and generates coordinated solutions that benefit workers.

Outcomes for Employers
- 41% employers report reductions in turnover
- 84% employers report significant increases in productivity
- 100% employers report participation in Partnership was valuable

Outcomes for Workers
- 48% worker participants exited poverty
- 18% higher earnings
- More likely to work and in jobs with benefits
Sector Strategies Coming of Age:
EDUCATION, WORKFORCE & ECONOMIC DEVELOPMENT

I. Education  Career Pathways

II. Workforce Development  Sector Partnerships

III. Economic Development  Industry Clusters

Designs by THE WOOLSEY GROUP
Workers graduate with industry-approved credentials that get them hired.

Input from industry

Sector Partnership

Strategic Partners create a Career Pathway System based on industry needs

Partner synergies reverberate back

Industry Members

Convener

Career Pathway System

ENTER WORKFORCE

RETRAINING

Workforce training (certificate)

University (degree)

Community college (degree or certificate)

Organized labor training/apprenticeships (certificate)

High school (diploma or equivalent)

Adult Basic Education (credential)

Designs by THE WOOLSEY GROUP
Workers graduate with industry-approved credentials that get them hired.

Strategic Partners create a Career Pathway System based on industry needs.

Partnership synergies reverberate back

Input from industry

Sector Partnership

National Governors Association Designs by THE WOOLSEY GROUP
Located on the Virginia Peninsula

- Engaged 14 Major Manufacturers in the region
- Local Workforce investment board
- Community colleges
- Six school districts

Consortium Dedicated to:
- Research and Development
- Implementation and continuous improvement of career pathways
- Education & training specifically tailored to more than 11,000 jobs available in next 5 years

Regional Strategic Planning:
Skills to Succeed Inventory (2012 – 2016)
Road map to Success (Strategic Plan)
The occupations and job openings include:

- CNC and Robotics Operators – 350
- Coating Specialists (Surface Prep Technicians) – 1,300
- Electricians – 1,700
- Engineers – 200
- Fabricators/Sheetmetal Workers – 950
- Fitters – 1,600
- Machinists – 1,200
- Production and Account Managers – 150
- Pipefitters – 1,850
- Repair Technicians – 150
- Welders – 1,700
## Virginia’s Advanced Manufacturing Consortium

### Hampton Roads Higher Education and Workforce Credentials In Manufacturing Related Careers

<table>
<thead>
<tr>
<th>OCCUPATION</th>
<th>TNCC</th>
<th>HU</th>
<th>ODU</th>
<th>NSU</th>
<th>NNS-AS</th>
<th>NHREC</th>
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<tr>
<td>Computer Aided Drafting/Design</td>
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<td>Engineering Performance Spec.</td>
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<td>Environmental Engineering</td>
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<td>Optical Engineering</td>
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<td>Diesel Mechanics Tech.</td>
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<td>CNC Machining</td>
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<td>Plumber/Plipfitter</td>
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Advanced specializations along Career Pathways are available through the community colleges and the universities in many degrees, and with the NNS Apprentice School in Advanced Shipyard Operations, Cost Estimation, Modeling and Simulation Marine Design, Nuclear Testing and Production Planning.

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**Abbreviations:**
- AAS — Associate of Applied Science
- AS — Associate’s Degree
- ARI — Apprenticeship Related Instruction
- CERT — Certified Career Studies Certificate
- CSC — Career Studies Certificate
- HU — Hampton University
- MS — Master of Science
- ODU — Old Dominion University
- NSU — Norfolk State University
- NNS-AS — Newport News Shipyard-Apprentice School
- NHREC — New Horizons Regional Education Center
- TCC — Thomas Nelson Community College
- TID — Tidewater Community College
- TCC — Hopewell Community College
- RCC — Rappahannock Community College
- WD — Workforce Development
**Virginia’s Advanced Manufacturing Consortium**

**Current Peninsula Career Pathway Opportunities (High School – University)**

<table>
<thead>
<tr>
<th>Youth</th>
<th>Bachelor Degree</th>
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<tbody>
<tr>
<td>High School/GED</td>
<td>Bachelors Degree</td>
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<tr>
<td>Dual Enrollment Program</td>
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<td>High School/GED</td>
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<td>High School/GED</td>
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<td>High School/GED</td>
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<td>Apprenticeship</td>
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<td>Adult Basic Training (GED)</td>
<td>On-the-Job Training</td>
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<td>Middle College Certificate</td>
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<tr>
<td>One Stop Training Grants</td>
<td>Certification &amp; Degrees</td>
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<td>Workforce Training</td>
<td>Bachelors Degree</td>
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<td>On-the-Job Training</td>
<td>Customized Training</td>
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<td>Workforce Credential</td>
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<td>Pre-Hire Training</td>
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<td>National Governors Association</td>
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</table>
Designs by

NATIONAL GOVERNORS ASSOCIATION

Strategic Partners create a Career Pathway System based on industry needs

Workers graduate with industry-approved credentials that get them hired.

Partnership synergies reverberate back

Input from industry

Sector Partnership

Industry Members

Convener

Small Businesses

Medium Firms

Large/Anchor Firms

Support Sectors

Employment

Start-ups

Innovation and Technology

Infrastructure

Markets and Users

Supply Chains

ENTER WORKFORCE

RETRAINING
How can you use this approach to help workers/jobseekers and employers?
How can you use this approach to help workers/jobseekers and employers?
Workers graduate with industry-approved credentials that get them hired.

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Industry Members

Large/Anchor Firms
Support Sectors
Startups
Medium Firms
Small Businesses
Markets and Niche
Supply Chains
Infrastructure
Innovation and Technology
Labor

High school (diploma or equivalent)
Adult Basic Education (credential)
Community college (degree or certificate)
Organized labor training/apprenticeships (certificates)
Workforce training (certificate)
University (degree)
Career Pathway Systems Provide:

- Clear path to stacked credentials and career advancement (including for lower-skilled individuals)
- Participant-focused approaches to education and training to promote retention and success
- Career navigation and supportive services
- Economic security and advancement for workers
Workers graduate with industry-approved credentials that get them hired.

Strategic Partners create a Career Pathway System based on industry needs.

Partnership synergies reverberate back to Industry Members.

Input from industry.

Sector Partnership

Designs by THE WOOLSEY GROUP
Sector Partnerships Provide:
Employer engagement in:

- sector and labor market research
- pathway mapping
- program and curriculum design
- Internships and other work experiences
- incumbent worker advancement
Workers graduate with industry-approved credentials that get them hired.

Strategic Partners create a Career Pathway System based on industry needs

Partnership synergies reverberate back

Input from industry

Sector Partnership

Strategic Partners

Convener

Industry Members

Small Businesses
Medium Firms
Large/Anchor Firms
Support Sectors
Suppliers
Markets and Results
Infrastructure
Innovation and Technology
Industry Clusters Provide:
- Regionally and internationally competitive businesses
- An approach for broad-based job growth in high-wage, high-growth industries
- Improved R&D, infrastructure investments, etc.
Designs by THE WOOLSEY GROUP

**Career Pathway System**
- High school (diploma or equivalent)
- Adult Basic Education (credential)
- Community college (degree or certificate)
- Workforce training (certificate)
- University (degree)
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**Industry Cluster**
- Small Businesses
- Medium Firms
- Large/Anchor Firms
- Support Sectors
- Suppliers
- Markets and Users
- Supply Chains
- Infrastructure
- Innovation and Technology

**Strategic Partners**
- Create a Career Pathway System based on industry needs

**Workers**
- Graduate with industry-approved credentials that get them hired.

**Sector Partnership**
- Partnership synergies reverberate back
Sector-Focused Career Pathways
LOCAL CAREER PATHWAYS AND PROGRAMS
Sector-Focused Career Pathways

1. Well-connected education and training offerings informed by a sector partnership; often delivered via multiple linked and aligned programs.

Increasing skills, competencies, and credentials informed by industry/employers.
1. Well-connected education and training offerings informed by a sector partnership; often delivered via multiple linked and aligned programs.

2. Multiple entry points/on-ramps including for those with limited education, English, skills, and work experiences, i.e., bridge programs.

- e.g., corrections
- e.g., ABE/pre-college
- e.g., career and technical ed
- e.g., military transition
- e.g., incumbent worker

Increasing skills, competencies, and credentials informed by industry/employers.
Sector-Focused Career Pathways

LOCAL CAREER PATHWAYS AND PROGRAMS

1. Well-connected education and training offerings informed by a sector partnership; often delivered via multiple linked and aligned programs

2. Multiple entry points/on-ramps including for those with limited education, English, skills, and work experiences, i.e., bridge programs

3. Multiple exit points at successively higher levels of family supporting employment and aligned with subsequent entry points

Increasing skills, competencies, and credentials informed by industry/employers

- e.g., incumbent worker
- e.g., military transition
- e.g., career and technical ed
- e.g., corrections
- e.g., ABE/pre-college

Sector Partnership

- e.g., one-year credential
- e.g., industry certificate
- e.g., 2-year degree
- e.g., 4-year degree
- Good Job
- Good Job
- Good Job
- Good Job
Career Pathway Programs have four key elements:

• Participant-focused instruction and training

• Appropriate and meaningful assessment

• Supportive services and career navigation

• Direct connections to employment
Rochester Medical Careers FastTRAC Career Pathways:

- Emergency Medical Technician
- Medical Coding Specialist
- Surgical Technician
- 5 others

Increasing skills, competencies, and credentials informed by Mayo Clinic and partners
Rochester Career Pathway Programs:

- Participant-focused instruction and training
  - Courses are contextualized to healthcare
  - Some college gatekeeper courses are integrated (basic skills + content in same class)
- Appropriate and meaningful assessment
- Supportive services and career navigation
  - Navigators assist with career plan development, accessing supporting services, career pathway transitions, job search, resume writing, interviewing skills, etc.
  - Assistance with applying to college, financial aid, etc.
- Direct connections to employment
  - Incumbent workers continue working
  - Navigators assist with finding training-related employment
Sector-Focused Career Pathways

LOCAL CAREER PATHWAYS AND PROGRAMS

Sector-focus Career Pathways Can Help Reduce Economic and Racial Disparities

• Mayo Clinic committed to increasing diversity; Rochester CP targets minority, non-traditional, and Veteran populations

• Twin Cities HIRED Career Pathways
Career Pathway Participant Metrics

A. Interim Education and Training Outcomes
   • e.g., skill level gain; attainment of high school diploma or GED

B. Pathway Education and Training Outcomes
   • e.g., attain certificate or degree

C. Labor Market Outcomes
   • e.g., employment, retention, wage gain

Source: Alliance for Quality Career Pathways Beta Framework, CLASP, 2013
Sector Strategy Employer Metrics

- Retention and/or vacancy rates
- Reduction of vacancy rates in areas of highest need
- Time to fill positions/cost of recruitment
- Productivity measure
- Quality of work measure

Sector-focused Career Pathway Systems
Career Pathways and Programs
Sector-Focused Career Pathways

SECTOR-FOCUSED CAREER PATHWAY SYSTEMS

Local/Regional Career Pathway System

Career Pathways and Programs
Sector-Focused Career Pathways

SECTOR-FOCUSED CAREER PATHWAY SYSTEMS

Local/Regional Career Pathway System*

Career Pathways and Programs

* Partnerships Follow Guiding Principles:
  ✓ Shared vision and strategy
  ✓ Leadership and commitment to CPs
  ✓ Demand-driven/employer engagement
  ✓ Aligned policies, measures, and funding
  ✓ Use data and promote continuous improvement
  ✓ Enhance partner capacity
Local/Regional Career Pathway System*

State Career Pathway System*

Career Pathways and Programs

Guiding Principles:
- Shared vision and strategy
- Leadership and commitment to CPs
- Demand-driven/employer engagement
- Aligned policies, measures, and funding
- Use data and promote continuous improvement
- Enhance partner capacity

Sector-Focused Career Pathways
SECTOR-FOCUSED CAREER PATHWAY SYSTEMS

* Partnerships Follow Guiding Principles:
Sector-Focused Career Pathways

SECTOR-FOCUSED CAREER PATHWAY SYSTEMS

* Partnerships Follow Guiding Principles:
  - Shared vision and strategy
  - Leadership and commitment to CPs
  - Demand-driven/employer engagement
  - Aligned policies, measures, and funding
  - Use data and promote continuous improvement
  - Enhance partner capacity
How Can a State Adopt a Sector-focused Career Pathway Approach?

- Commit to a shared vision and strategy
- Provide resources
- Implement supportive state policies
- Use data and shared measures
Greater Twin Cities United Way presents:

Sectoral Approaches to Workforce Development

Sponsored by:
Skilled for Life?
KEY FINDINGS FROM THE SURVEY OF ADULT SKILLS
Survey of Adult Skills in brief

166 thousand adults...
Representing 724 million 16-65 year-olds in 24 countries/economies, including 5,010 Americans

Took an internationally agreed assessment...

in literacy, numeracy and problem solving in technology-rich environments.
Skills of adults
Numeracy

- Japan
- Finland
- Netherlands
- Sweden
- Norway
- Denmark
- Slovak Republic
- Czech Republic
- Austria
- Estonia
- Germany
- Average
- Australia
- Canada
- Korea
- England/N. Ireland (UK)
- Poland
- Ireland
- France
- United States
- Italy
- Spain

Score
Skills of adults

Literacy

Japan
Finland
Netherlands
Australia
Sweden
Norway
Estonia
Czech Republic
Slovak Republic
Canada

Average
Korea
England/N. Ireland (UK)
Denmark

Germany

United States
Austria
Poland
Ireland
France
Spain
Italy
Literacy skills in younger and older generations

Average 16-24 year-olds

KOREA

Germany

Norway

US

UK

Average 55-65 year-olds

Spain

Finland

France

UK

US

Norway

Germany

Finland

Spain

KOREA

Score OECD