Overview of the *RII Track-2 FEC: Building Field-based Ecophysiological Genome-to-Phenome Prediction* Project

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February 15, 2019


3 fruits
MARMALADE
Orange
MARMALADE

source: http://www.kuliacooks.com/2013/11/making-guava-butter.html

EPSCoR

Established Program to Stimulate Competitive Research

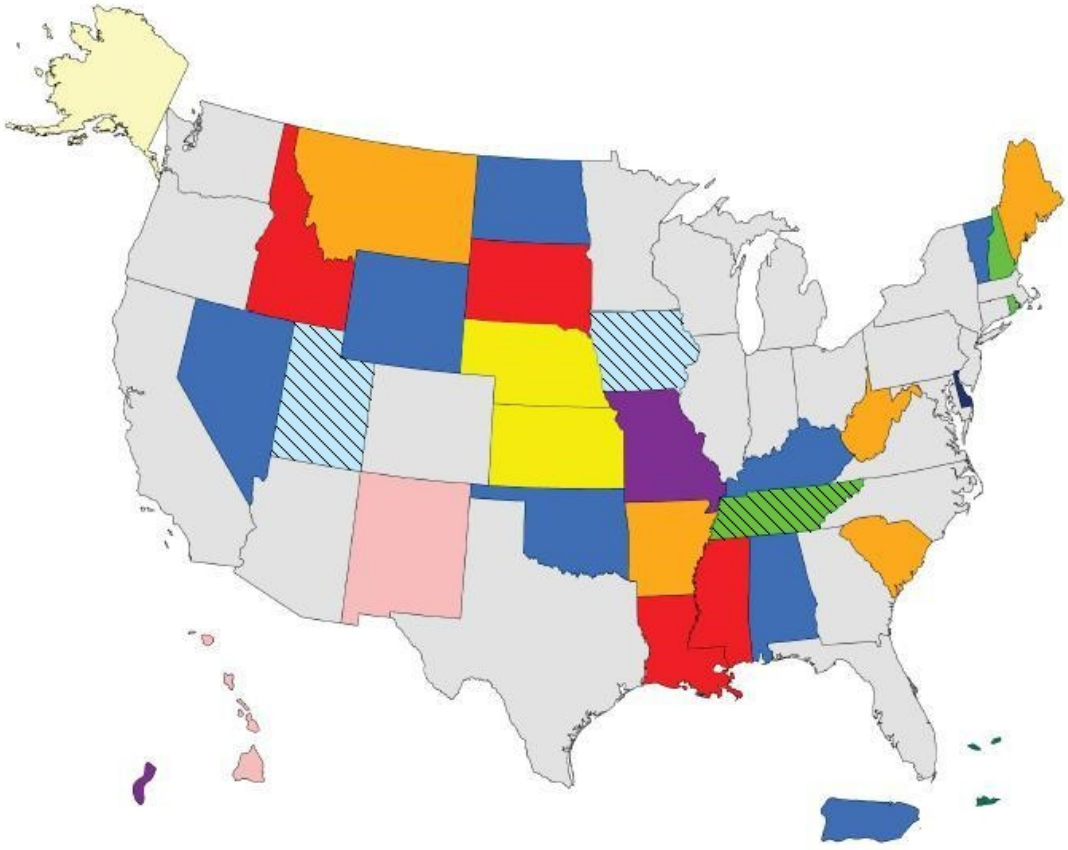
Mission

EPSCoR enhances research competitiveness of targeted jurisdictions (states, territories, commonwealth) by strengthening STEM capacity and capability

Vision

EPSCoR envisions its jurisdictions as recognized contributors to the national and global STEM research enterprise

EPSCoR Jurisdictions



1980
Arkansas
Maine
Montana
South Carolina
West Virginia

1985
Alabama
Kentucky
Nevada
North Dakota
Oklahoma
Puerto Rico
Vermont
Wyoming

1987
Idaho
Louisiana
Mississippi
South Dakota

1992
Kansas
Nebraska

2000
Alaska

2001
Hawaii
New Mexico

2002
U.S. Virgin Islands

2003
Delaware

2004
New Hampshire
Rhode Island
Tennessee

2009
Iowa
Utah

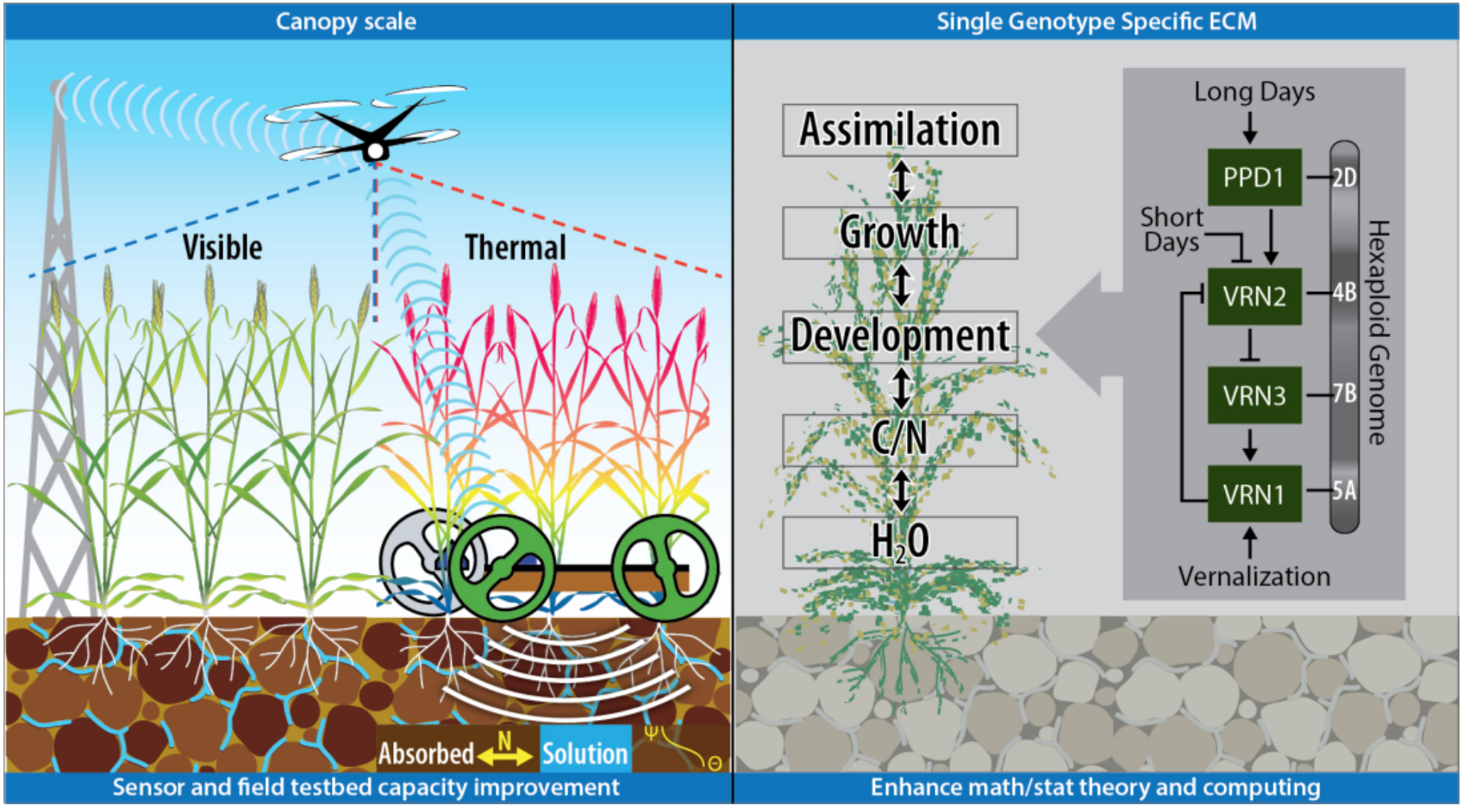
2012
Guam
Missouri

Note: As of FY16 Iowa, Tennessee, and Utah were no longer EPSCoR-eligible

RII Track 2 Focused EPSCoR Collaborations

RII Track-2 FEC builds ***interjurisdictional collaborative teams*** *of EPSCoR investigators in scientific focus areas consistent with NSF priorities. . . .The Science, Technology, Engineering, and Mathematics (STEM) research and education activities should seek to* ***broaden participation*** *through the strategic inclusion and integration of different types of individuals, institutions, and sectors throughout the project. Proposals must describe a comprehensive and integrated vision to* ***drive discovery*** *and build* ***sustainable STEM capacity*** *that exemplifies* ***diversity of all types*** *(individual, institutional, geographic, and disciplinary). . . .*

Genome-to-Phenome Conceptual Framework



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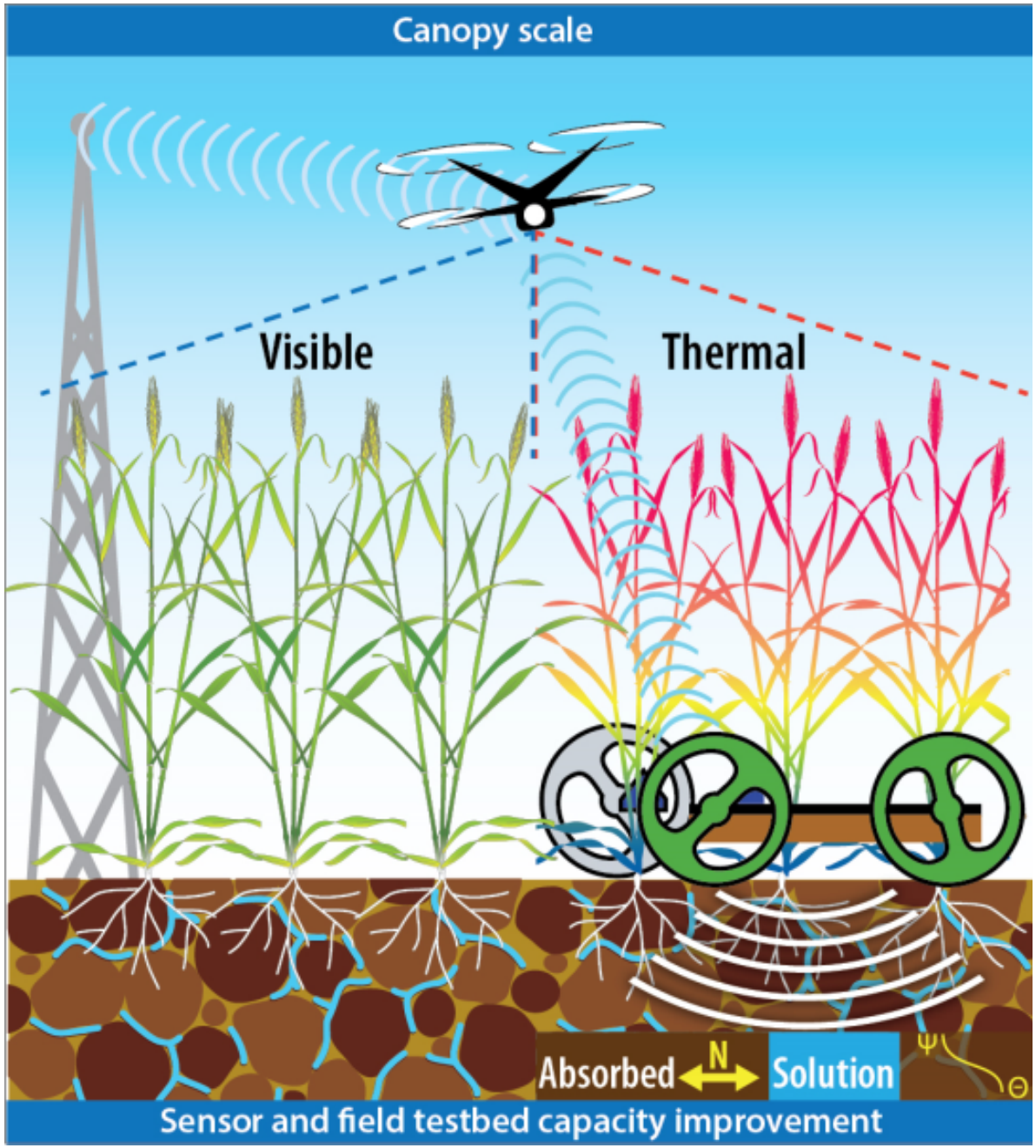
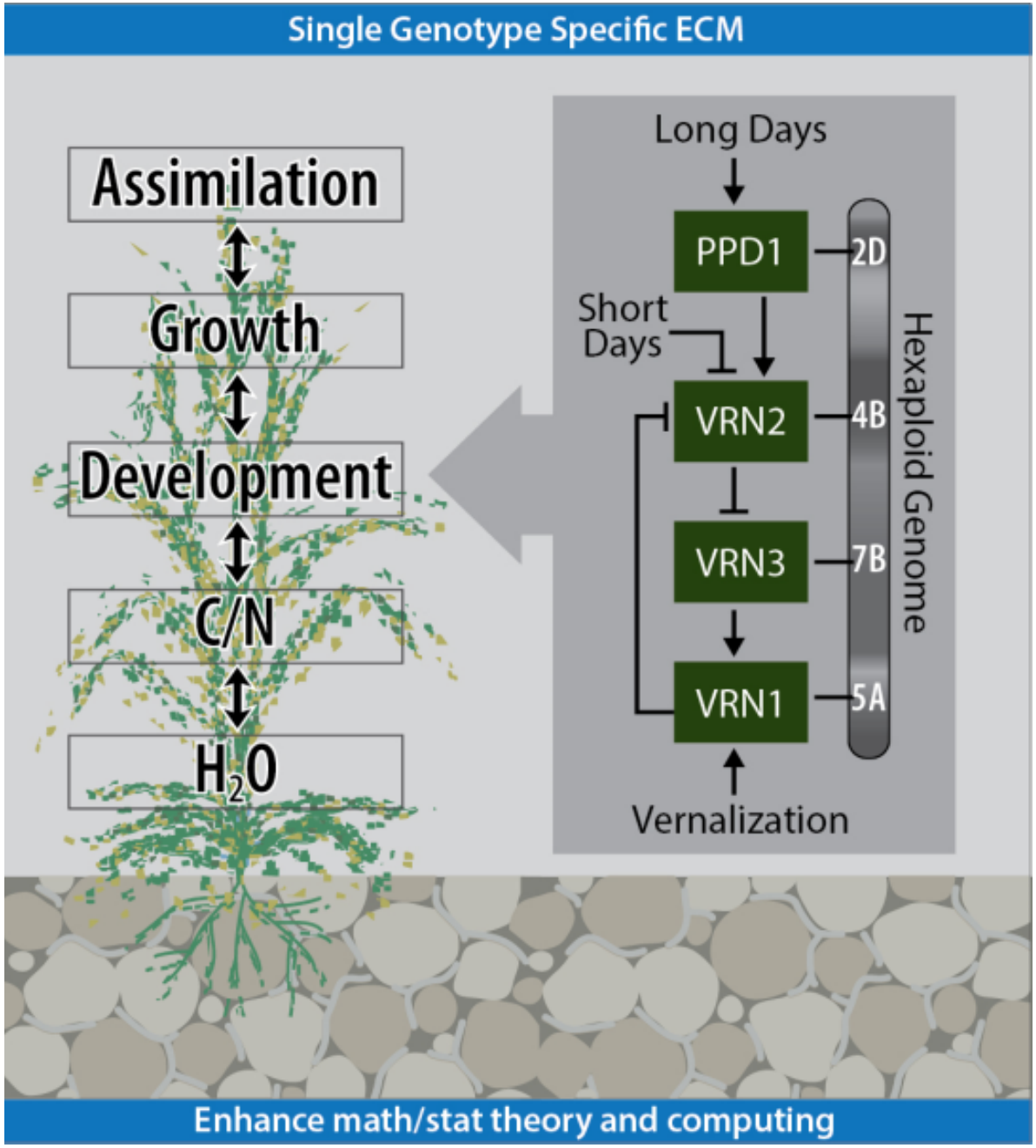
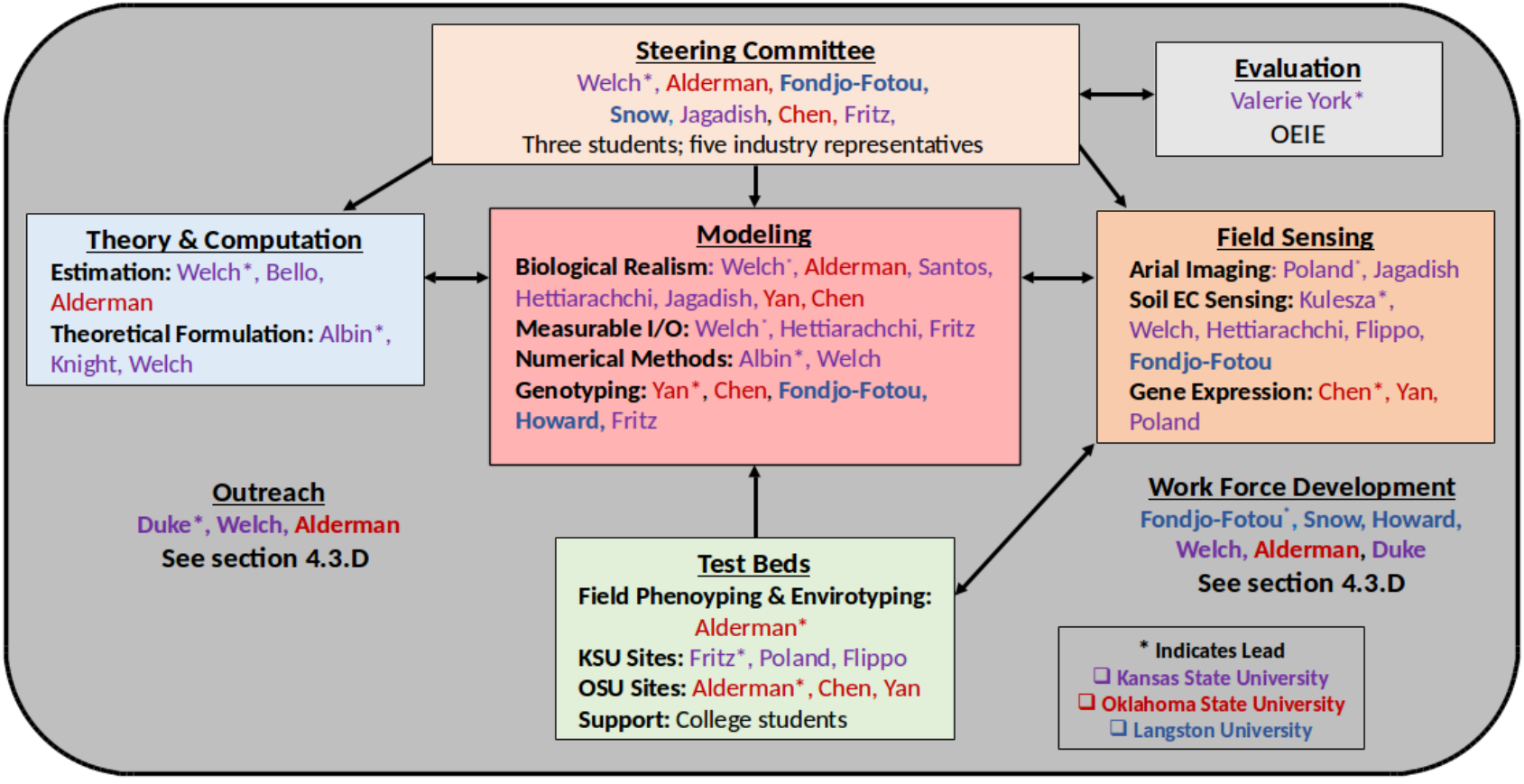


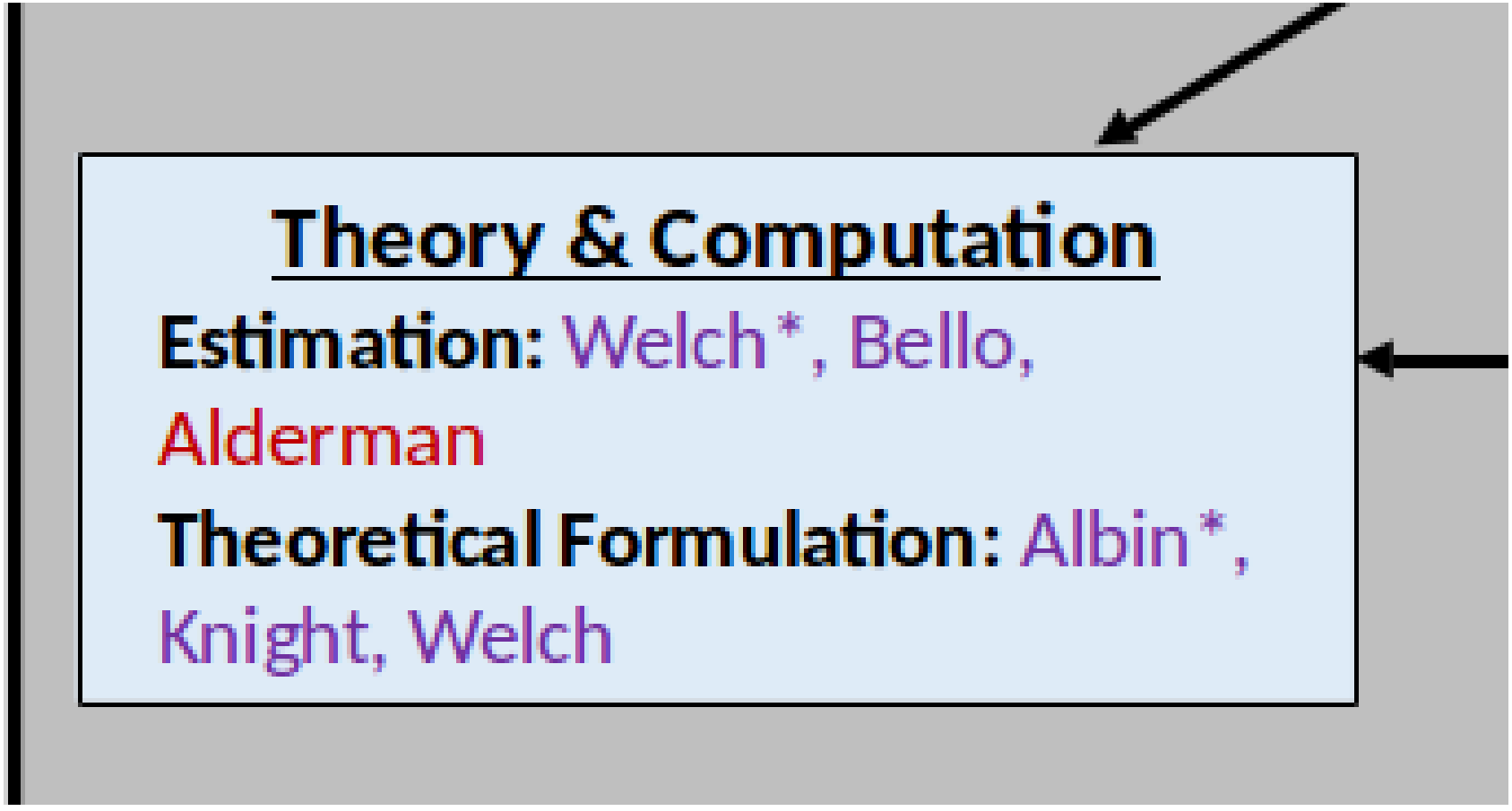
Genome-to-Phenome Conceptual Framework



Genome-to-Phenome Project Structure



Genome-to-Phenome Project Structure



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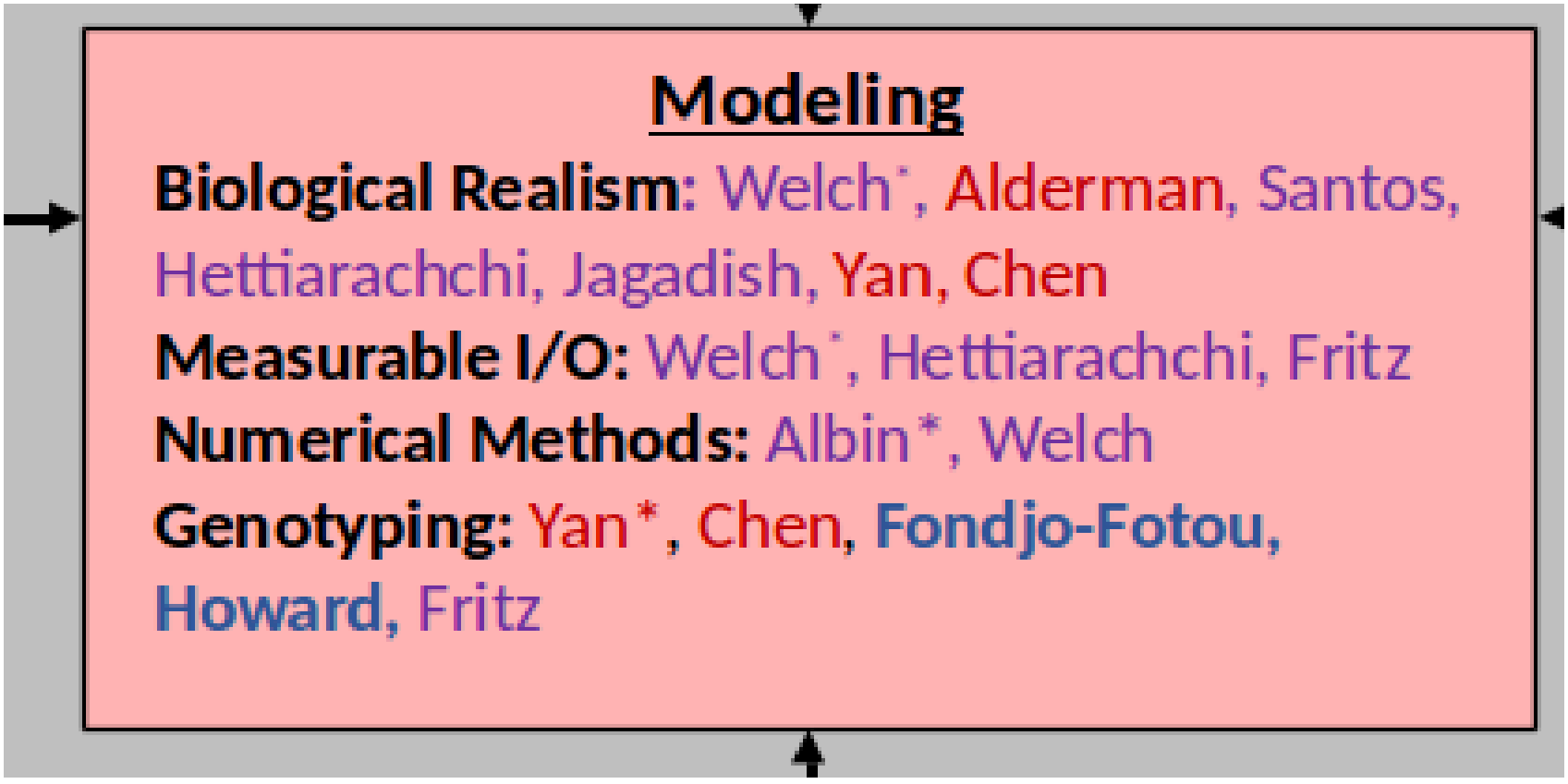

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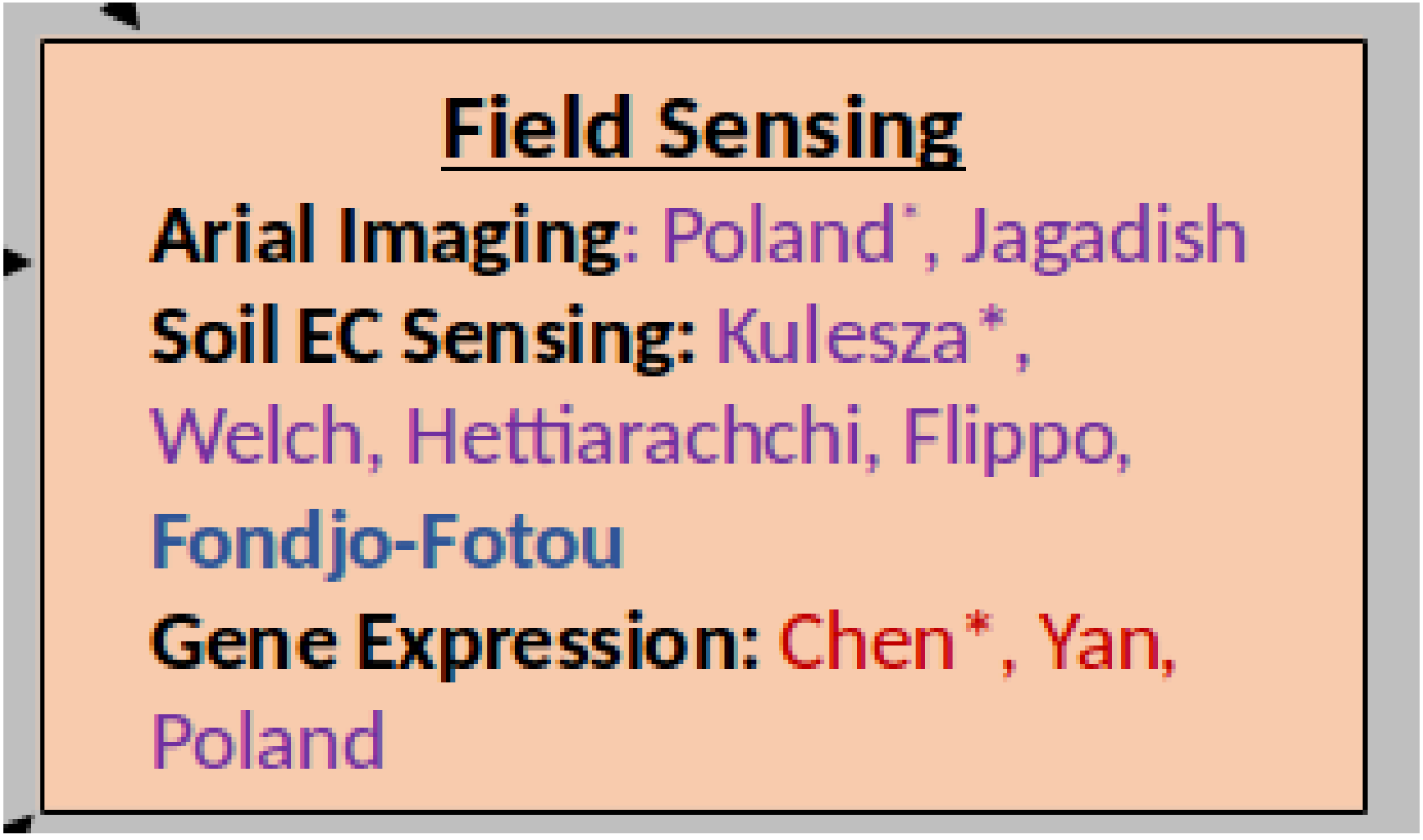
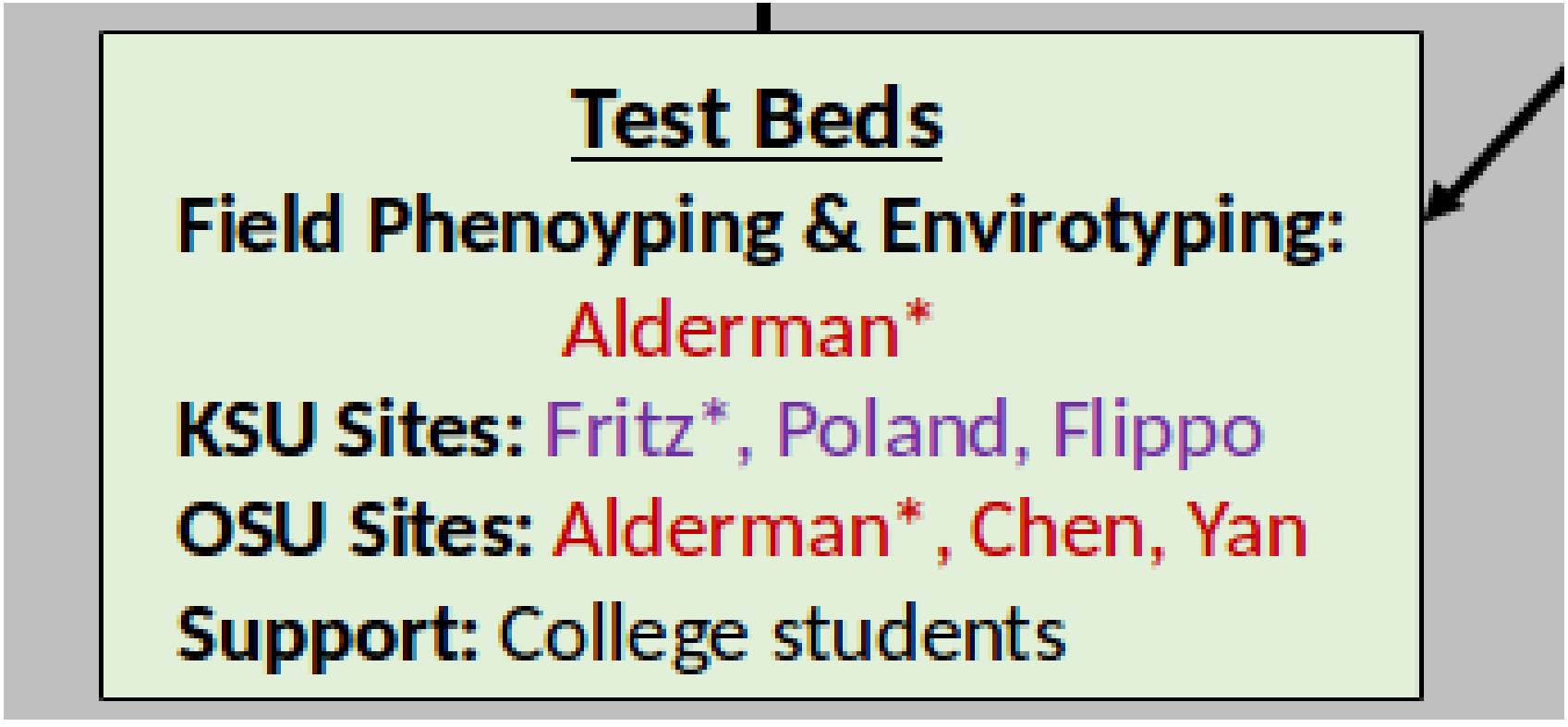


Genome-to-Phenome Project Structure



Genome-to-Phenome Project Structure

Work Force Development

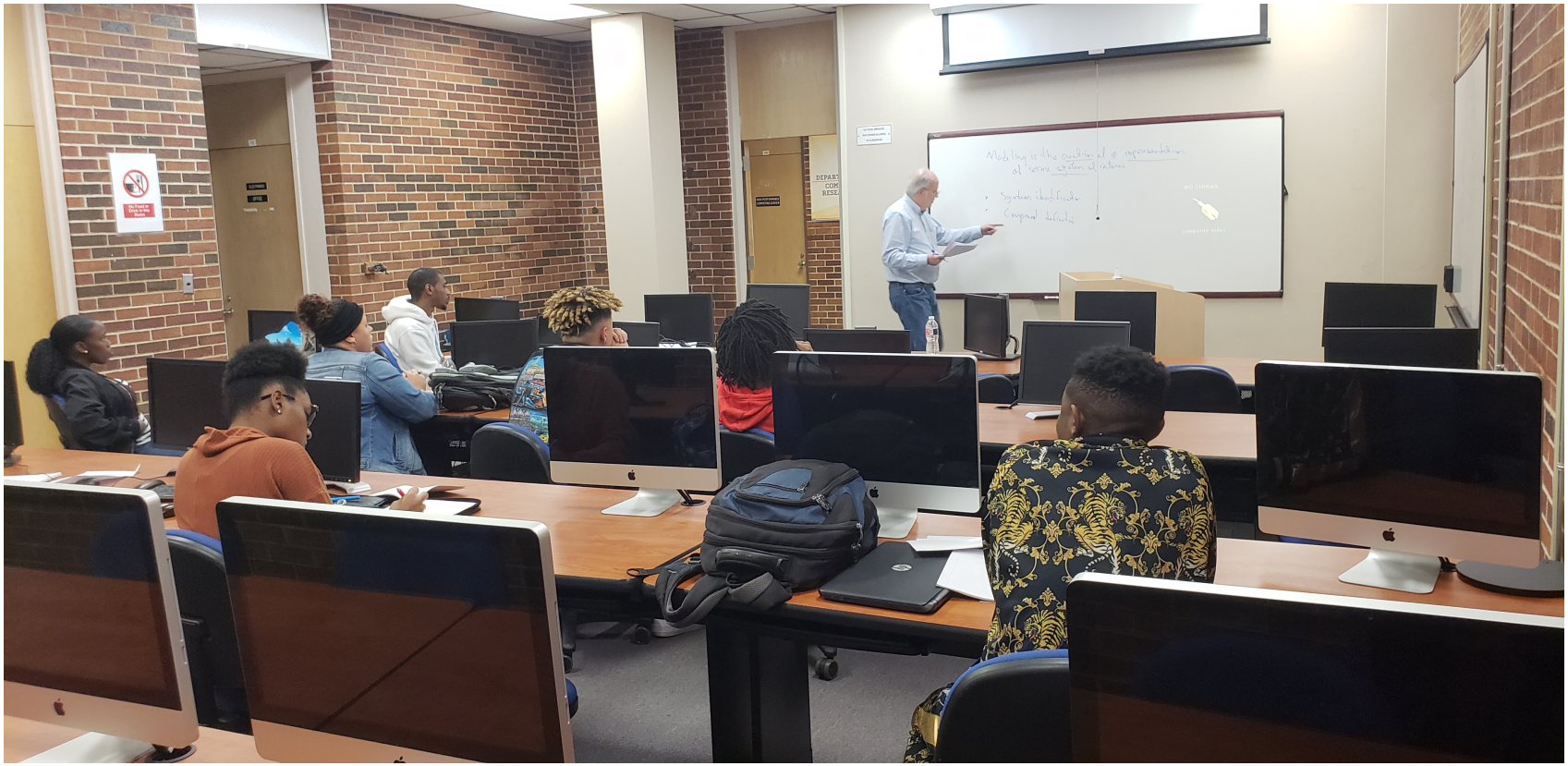
Fondjo-Fotou*, Snow, Howard, Welch, Alderman, Duke

Outreach

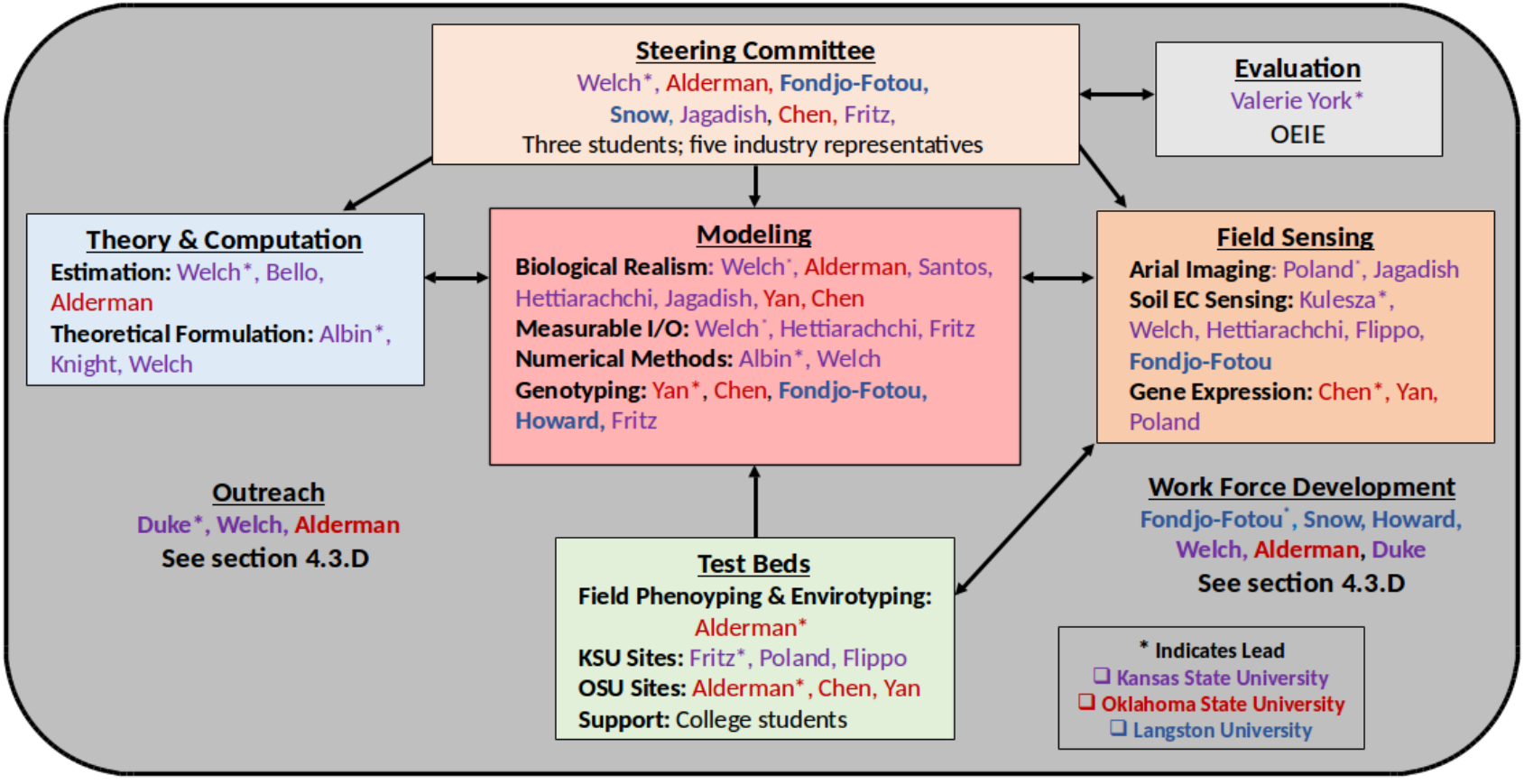
Duke*, Welch, Alderman

Genome-to-Phenome Project Structure

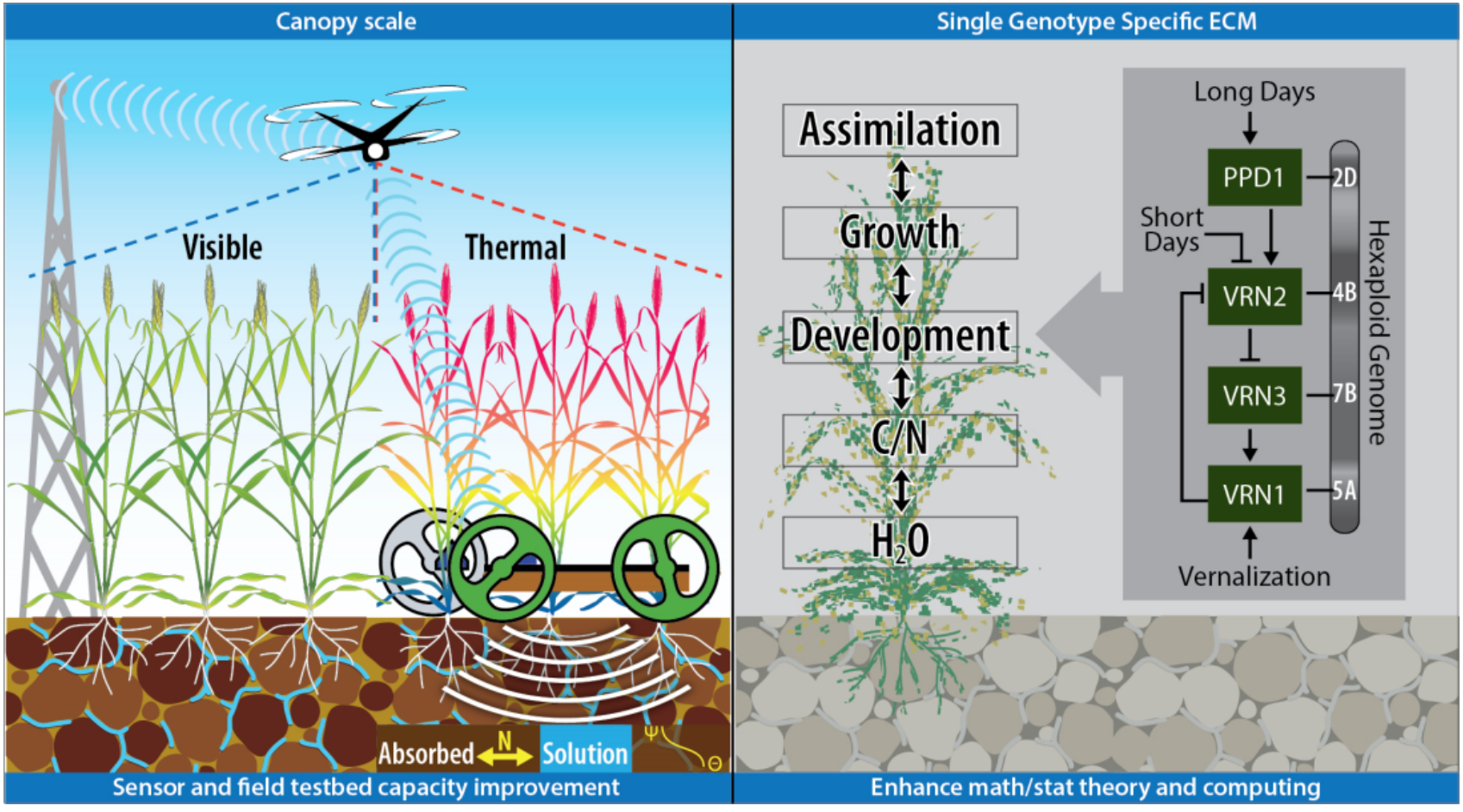
Genome-to-Phenome Project Structure



Genome-to-Phenome Project Structure



Summary


Canopy scale
Visible
Thermal
Absorbed
N
Solution
Sensor and field testbed capacity improvement
Single Genotype Specific ECM
Assimilation
Growth
Development
C/N
H2O
Long Days
PPD1
2D
Short Days
VRN2
4B
VRN3
7B
VRN1
5A
Hexaploid Genome
Vernalization
Enhance math/stat theory and computing

Acknowledgements

This material is based on work supported by the National Science Foundation under Grant No. OIA-1826820.