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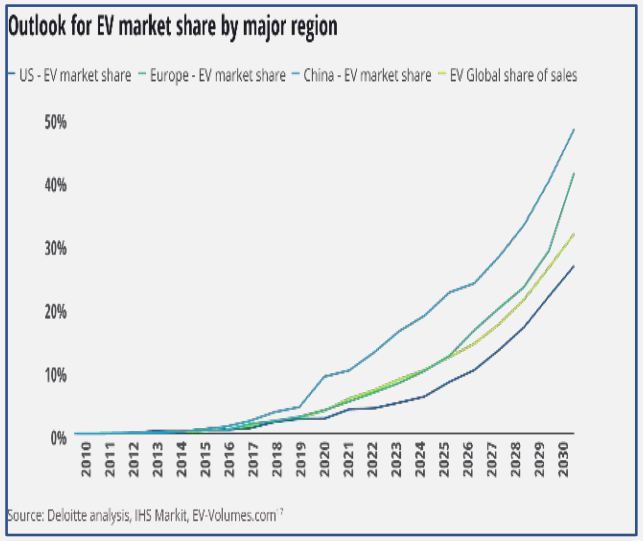
Alabama Transportation Institute

Alabama Mobility and Power Center

EV Adoption trends

EV sales forecast



EV sales in 2030 are estimated at;

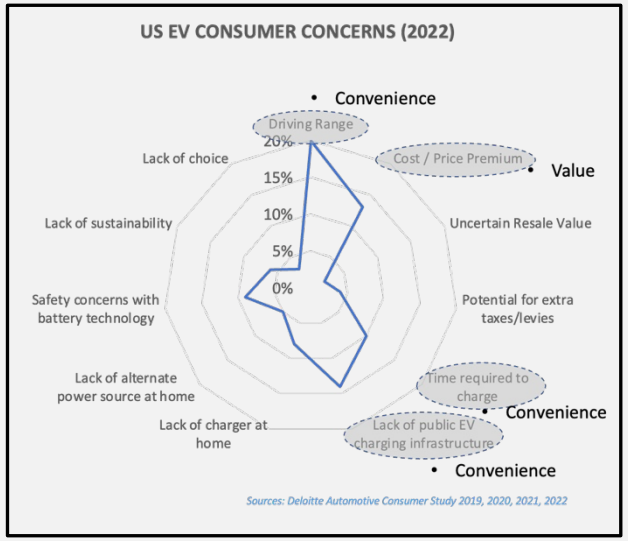
Low forecast - 320,000 units
(2% of new vehicle sales)

Medium forecast – 2,200,000 units
(12% of new vehicle sales)

High forecast – 6,800,000 units
(40% of new vehicle sales)

DRIVE Summary Report on EVs at Scale and the U.S. Electric Power System - November 2019 hppt://energy.gov

EV consumer concerns



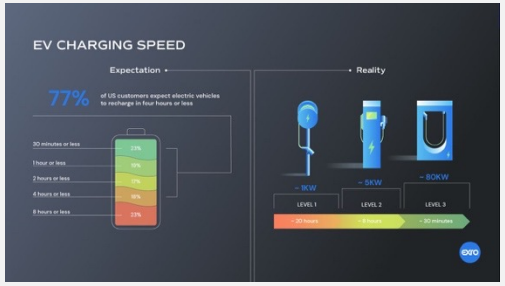
US EV consumer concerns:

- Driving range
- Affordability
- Charging Infrastructure
- Charging time

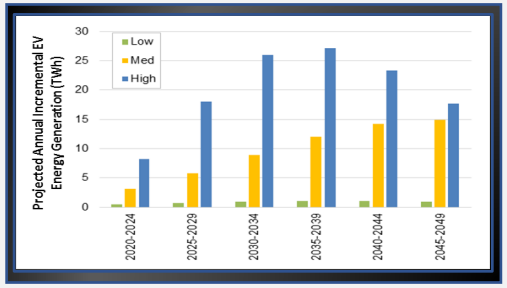
- Utility Company concerns
  - Grid loading
  - Load balancing

Variables

Charging Infrastructure



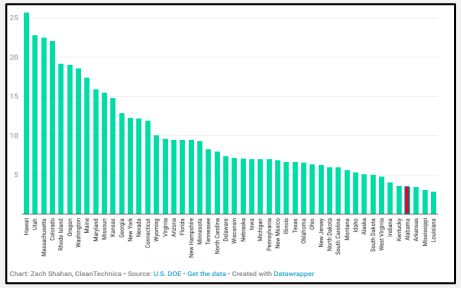
Power stability



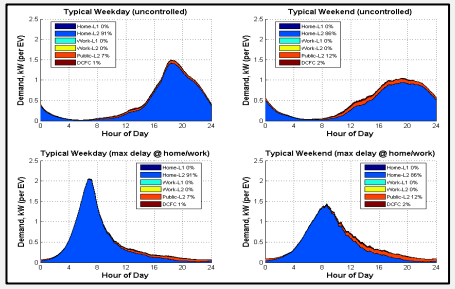
EV range

EV affordability

Outlook



AMP focus



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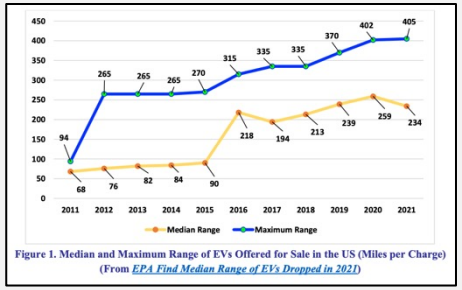
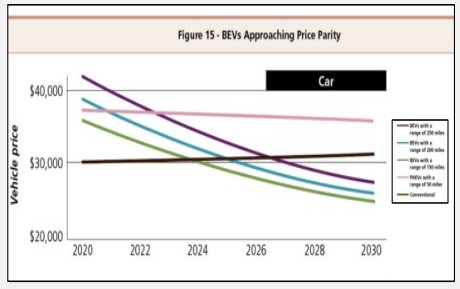
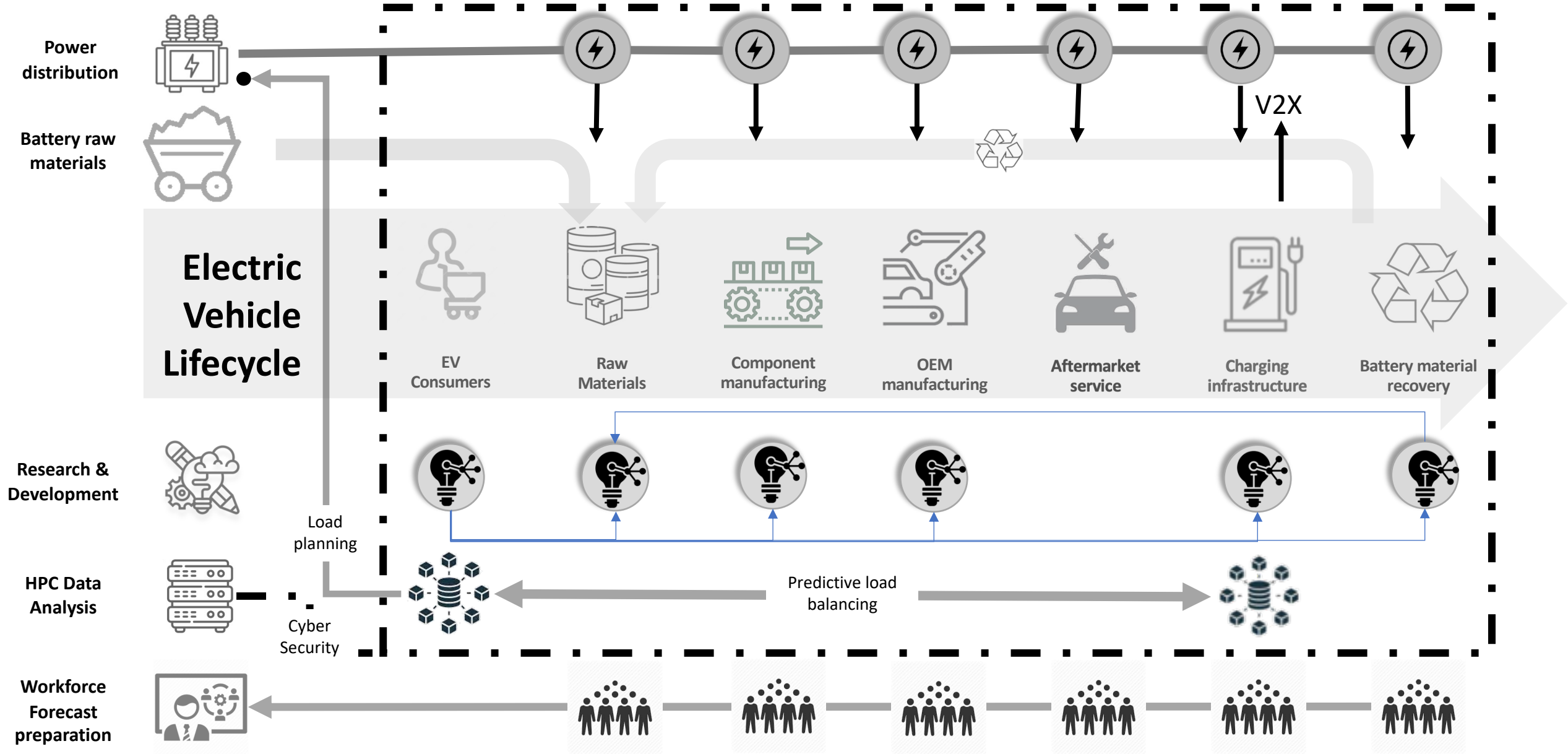


Parity in 2 years



Parity in 3 years

Electric Vehicle Eco-system



MAJOR THEMES

Power distribution

CASE Research

Cyber Security

Consumer Intelligence

Materials research

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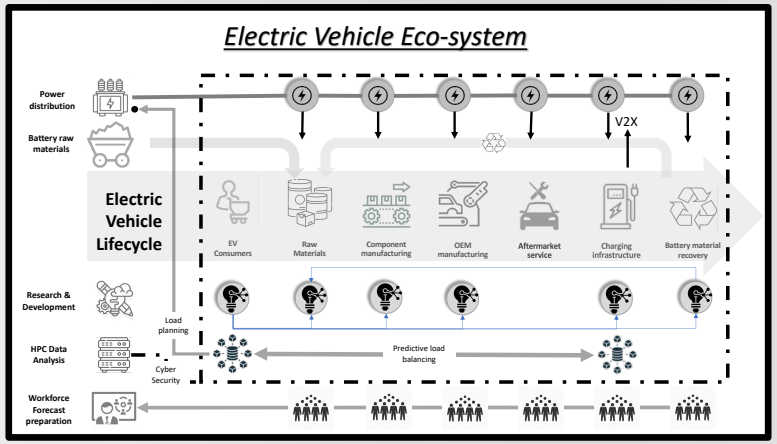
SCOPE



Innovative start-up companies

Capital Investment Area growth

Economic Development

Annual Consortium fees

Consortium growth

ALABAMA MOBILITY AND POWER CENTER

Consortium

Marketable solutions

Industry needs

Research inspired products

Use inspired research

Innovation/ Information

Research initiatives

NSF

THE UNIVERSITY OF ALABAMA®

Consumer Intelligence

Power distributio n

CASE Research

Research

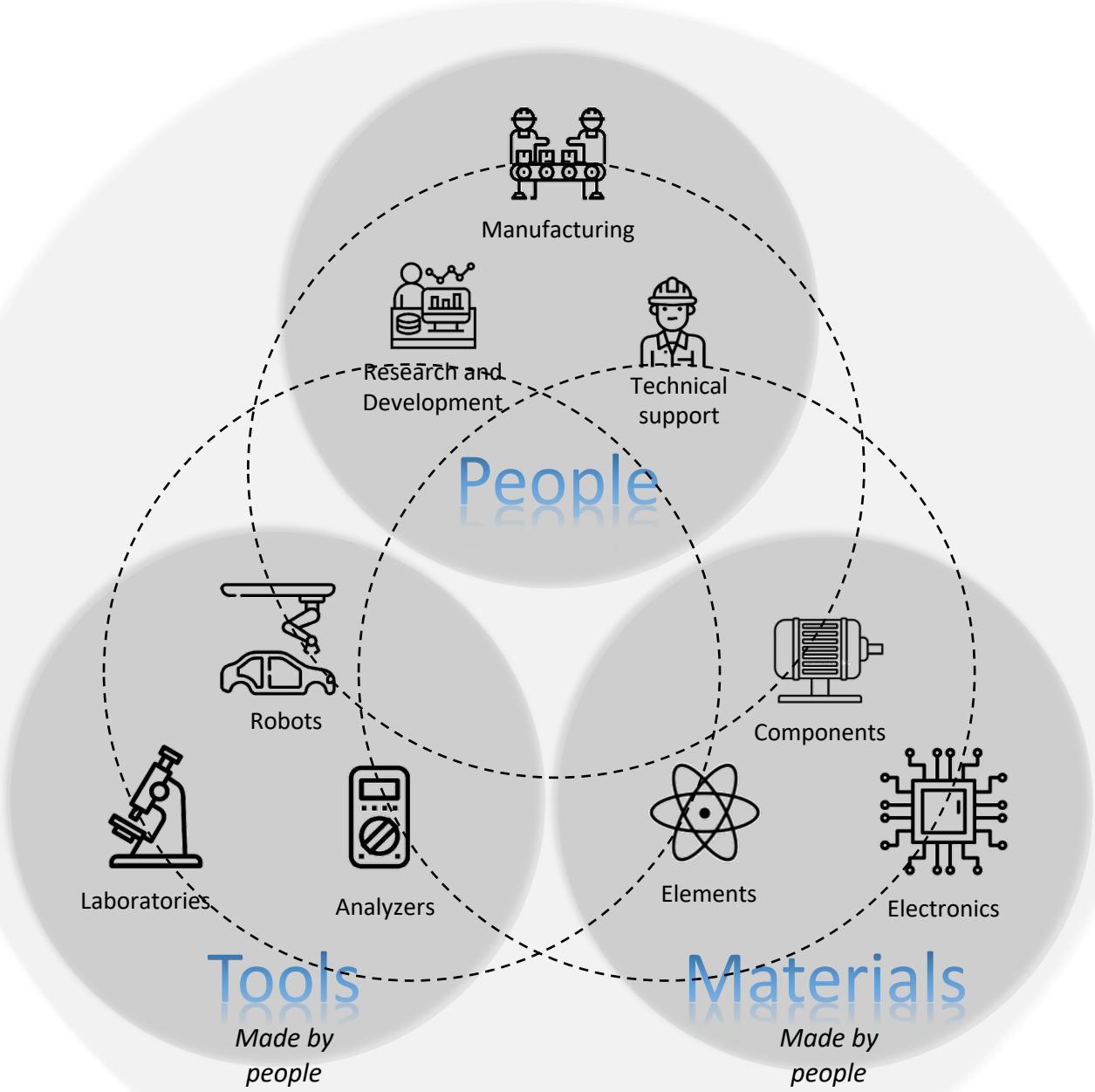
VALUE

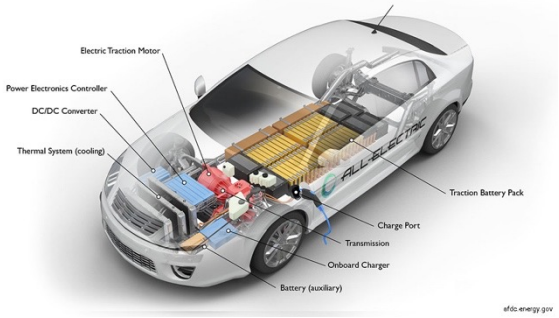
FUNDING

Electric Vehicle Eco-system

Workforce will be foundational in achieving an EV adoption strategic plan

Workforce Forecast preparation





Products

Purchased by people

All areas of the EV eco-system will have workforce requirements that the State must be prepared for.

alex
The
Alabama
Experience

alex summary

ALEX: The Alabama Experience, an innovative approach to workforce development, premiered at The World Games, in Birmingham Alabama.

Throughout The Alabama Experience, participants were monitored (using RFID solutions) to determine their interests and preferences, regarding careers, education and lifestyle.

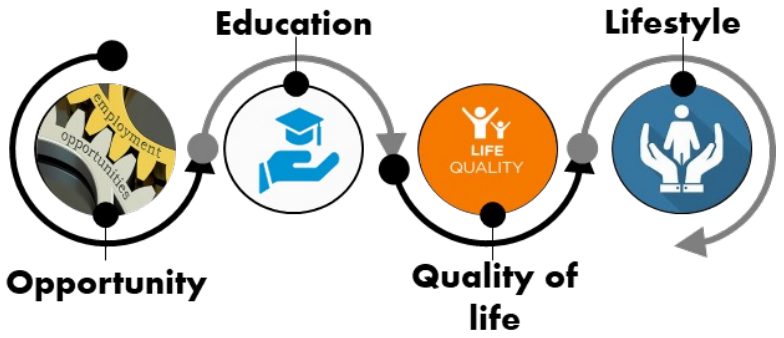
ALEX physical attributes:

- 12,000 sq ft activation space
- 1,650 sq ft of video walls
- Motion capture experience
- VR learning experience
- Industrial robot Korfball experience
- RFID interactive experience using 64 Kiosks

The World Games was an incredible platform for ALEX to launch and showcase all that Alabama has to offer. Over 12,300 unique visitors experienced ALEX at its premiere throughout the games.

alex strategy

A comprehensive workforce strategy convinces potential workforce candidates that a location offers them all the components required to entice them to seek employment.



- Alabama offers a low-cost living, plentiful education and employment opportunities in a state rich in culture and sports. The state should be a destination for those seeking employment.
- Unfortunately, these attractive features are not always known to job seekers both within the state and those from other states/countries.
- The World games offered a venue in which these characteristics could be showcased, improving retention of Alabama graduates and attracting new talent to the state.

Goals:

RETAIN TALENT

Convince current in-state college graduates to seek careers within the state.

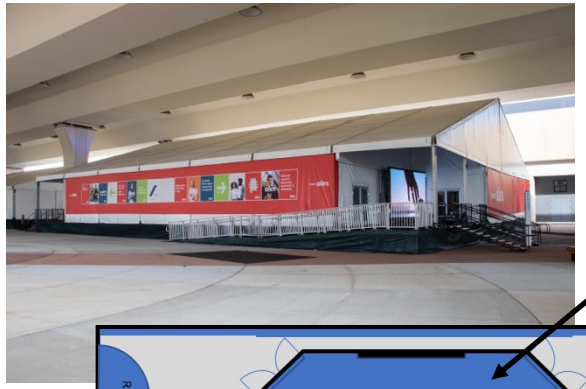
PERSUADE TALENT

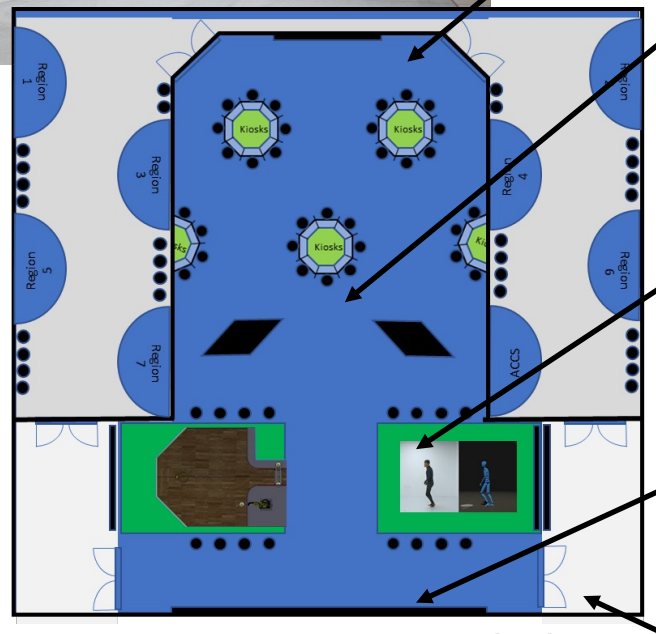
Persuade technically skilled participants to seek technical careers within the state.

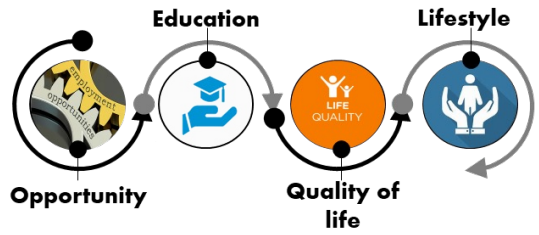
ATTRACT TALENT

Convince out of state/country job seekers to explore careers within the state.

alex







Personalized experience

D

Matched Job fair
Business offering immediate employment

C

Lifestyle opportunity pairing
Specific lifestyle details

B

Education opportunity pairing
Specific to career interest

A

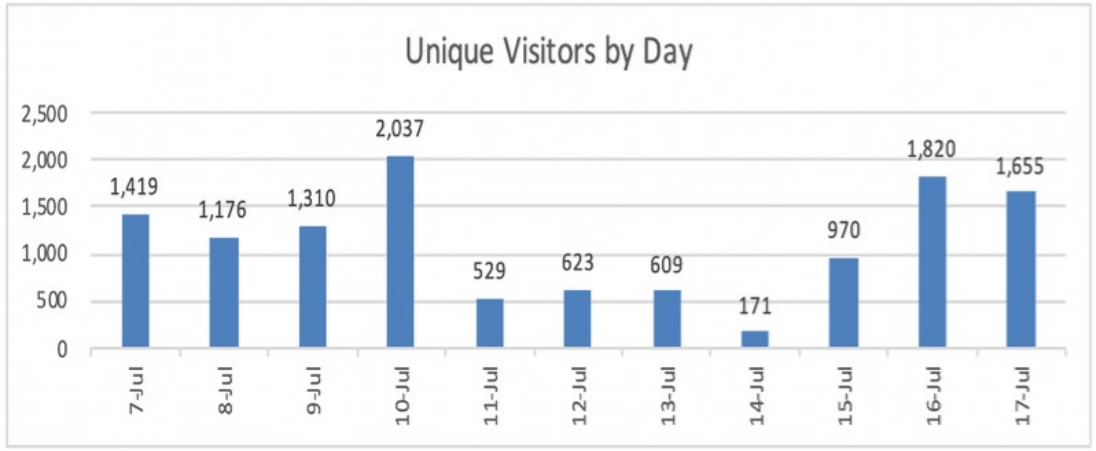
Career opportunity selection
Entertaining interactive display
Industry interest, geographic interest

RFID registration
- *Name, ZIP, Cell #*

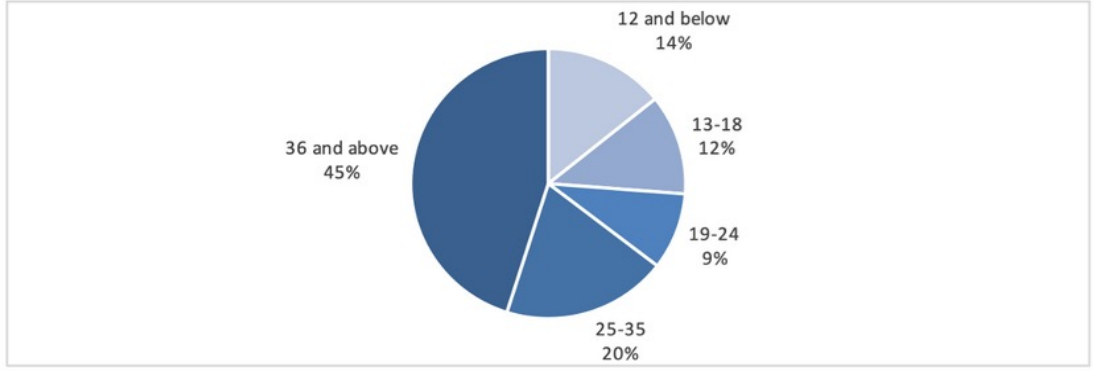
alex TWG results

Unique Visitors

Total	12,319
Daily Avg	1,120



Age breakdown



Careers Viewed:	Views All Ages	12 and below	13-18	19-24	25-35	36 and above
Advanced Manufacturing Views:	2,134	38.7%	29.4%	24.1%	23.8%	22.4%
Aerospace	716	13.0%	7.8%	8.8%	9.6%	7.2%
Production	194	2.6%	2.2%	3.1%	2.9%	1.9%
Technician	128	2.6%	1.3%	0.9%	1.4%	1.5%
Engineering	394	7.7%	4.2%	4.8%	5.3%	3.8%
Automotive	1,079	16.3%	15.0%	13.4%	10.9%	12.5%
Production	475	5.7%	3.7%	4.9%	3.9%	7.4%
Technician	194	3.0%	3.1%	1.9%	2.3%	2.1%
Engineering	410	7.6%	8.1%	6.6%	4.7%	3.0%
Chemical	339	9.5%	6.6%	1.9%	3.3%	2.7%
Production	88	2.3%	1.4%	0.5%	1.1%	0.7%
Technician	74	2.0%	1.6%	0.2%	0.8%	0.6%
Engineering	177	5.1%	3.7%	1.2%	1.4%	1.4%
Health Sciences Views:	3,061	27.4%	38.3%	44.5%	39.5%	36.5%
Health Technology	619	4.3%	5.2%	5.9%	8.8%	8.9%
Bioinformatician	213	1.7%	2.7%	2.0%	2.5%	3.0%
Data or Business Analyst	212	1.1%	1.3%	1.9%	3.2%	3.2%
Diagnostic and Therapeutic Technologist	194	1.5%	1.2%	2.0%	3.1%	2.7%
Patient Care	1,369	12.4%	20.8%	22.4%	17.3%	14.8%
Certified Medical Assistant	432	1.9%	6.9%	8.5%	4.9%	5.1%
Licensed Practical Nurse	181	2.6%	4.1%	2.5%	2.2%	1.4%
Registered Nurse	756	7.8%	9.8%	11.4%	10.3%	8.3%
Science and Research	1,073	10.7%	12.4%	16.2%	13.4%	12.8%
Clinical Research Coordinator	267	1.5%	2.6%	4.0%	4.1%	3.3%
Research Program Manager	316	2.9%	3.4%	3.4%	3.3%	4.5%
Researcher	490	6.3%	6.4%	8.8%	6.1%	5.0%
Information Technology Views:	3,070	33.9%	32.3%	31.4%	36.7%	41.1%
Network and Infrastructure	1,281	10.4%	9.4%	11.6%	13.8%	20.5%
Administrator	726	3.3%	4.2%	6.8%	6.7%	13.1%
Engineer or Designer	357	4.6%	3.8%	3.1%	4.9%	4.4%
Help Desk Support	198	2.4%	1.4%	1.8%	2.3%	2.9%
Software Development	990	15.3%	15.7%	10.1%	12.3%	10.2%
Architect or Engineer	316	4.6%	5.7%	3.4%	4.3%	2.9%
Programmer or Analyst	493	8.4%	6.8%	4.9%	5.9%	5.3%
Security	181	2.2%	3.1%	1.8%	2.1%	2.0%
Software Management	799	8.2%	7.2%	9.6%	10.6%	10.4%
Financial and Management	253	2.7%	1.8%	3.2%	2.9%	3.6%
Project or Product Management	407	3.7%	3.7%	4.8%	6.0%	5.2%
Quality Assurance and Testing	139	1.8%	1.7%	1.6%	1.7%	1.7%

alex Next steps

Path Forward

The premier of ALEX at the world games although successful has room for improvement.
ALEX has been incorporated at a 501C-3 L.L.C. and will continue to operate under the umbrella of the EDPA foundation. Though this organization, ALEX will fulfill its commitment to 6 more activations throughout the State. The improvement items derived from the affinity diagram analysis will be planned and executed ensuring that all ALEX activations going forward will be even more successful than the premier event.

Final Thoughts

ALEX was a very successful event in ways that are difficult to measure in concrete ways.
Successes include:

- Public and private developed tool that will give Alabama an advantage in the fierce workforce competition.
- Thousands of visitors' perception of the State were positively impacted by the activation at the world games.
- Workforce entities from around the State, worked in harmony to promote the State as a career destination.
- Thousands of Alabama residents were educated on the value the State has to offer and the differences in cost of living we take for granted.

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