

# Smart & Connected Childcare Communities

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Millions of young children attend childcare in the United States. But quality of childcare environments is highly variable, with limited ability to provide ongoing information to support improvement. **This planning grant explores the feasibility and acceptability of using sensors to index quality of childcare environments.**

- “Quality environments” have rich language, spaces to play with good light, comfortable temperatures and low background noise.
- Providers get little daily input on whether environments are high quality.
- Using sensors to measure childcare quality will increase insight into the aspects of environments that promote child development.
- Integrating sensor-based data into a shared platform with related app will advance network science.
- Community partnerships create new insights into the user needs, feasibility, and acceptability of this system.

Survey and focus groups with 80 childcare providers

Providers most concerned with background noise and language environments  
System viewed as generally acceptable

Using information to design prototype of system

- Childcare providers and parents will benefit from having better information on quality of childcare settings.
- Developmental science will benefit from greater insight into role of environment on child development.

- Initial work suggests childcare providers find use of sensors acceptable.
- Many sensors are available, affordable and used now, suggesting high potential for wide-scale adoption once a platform and app is developed.

- Publish in-depth lit review + findings to date from provider surveys and focus groups (Ongoing)
- Conduct focus groups with parents (Spring/Summer 2021)
- Finalize prototype & pilot testing (Summer 2021)