

# Ethical dialogue on Artificial Amniotic sac and Placenta Technology as a treatment option at the limit of viability – results of a Guidance Ethics Workshop

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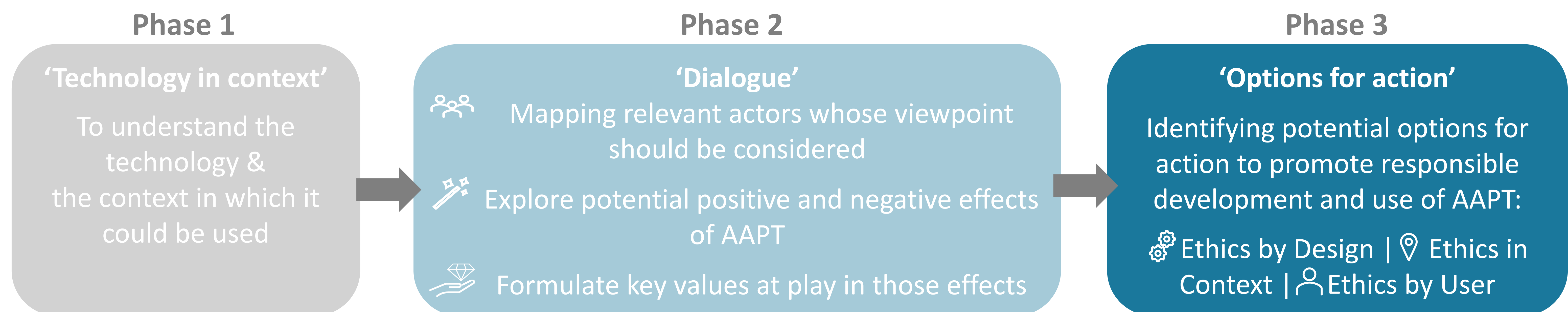
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## Background

- Extreme prematurity = main cause for perinatal mortality and morbidity in extreme premature birth
- Development Artificial Amniotic sac and Placenta Technology (AAPT) as potential treatment at the limit of viability
- AAPT mimics function of amniotic sac, amniotic fluid and placenta to improve mortality and morbidity
- Currently, animal experiments have yielded promising results, and human trials are imminent.
- Empirical ethical research with relevant stakeholders is an essential component of responsible innovation of AAPT

## Methods – Guidance Ethics Approach

- During a 4h workshop, representatives of patient groups, medical professionals, technologists and policy-makers went through three stages:



## Results\*

**Actors (n=53)**  
E.g., the child, pregnant person, partner, siblings, healthcare professionals, developers, policy makers, ethicists, researchers, insurance companies, society, the press, charity, researchers, patient organisations.

**Positive (+) & Negative (-) effects**  
+ Examples (N=14):  
*Potential for improved outcomes<sup>1</sup>*  
Less painful procedures  
Reduce healthcare costs of long-term consequences  
- Examples (n = 40)  
*A lot of uncertainties regarding the outcome<sup>2</sup>*  
Effect on the parent-infant bond  
Increased complexity of decision-making for parents  
Proportionality and equality issues

**Values**  
Values at play in identified effect  
*E1: Health, well-being, quality of life, autonomy, cost efficiency, safety, sense of responsibility, protection, enjoyment, participation.*  
*E2: Health, solidarity, well-being of child and parent, autonomy, freedom.*

**Options for action**  
*E2: a lot of uncertainties regarding the outcome →*  
 Further development of the technology based on interim results (with frequent evaluation moments).  
 Set clear boundaries, ensure long-term follow-up, be transparent and honest about data, making the choices clear and understandable

\*The reported results are preliminary and examples of the results we collected during the 4h-workshop

## Conclusion

For further development and implementation of AAPT, it is essential to continue with (ethical) dialogues and to take into account ethical values, considerations and concerns of relevant stakeholders.



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