

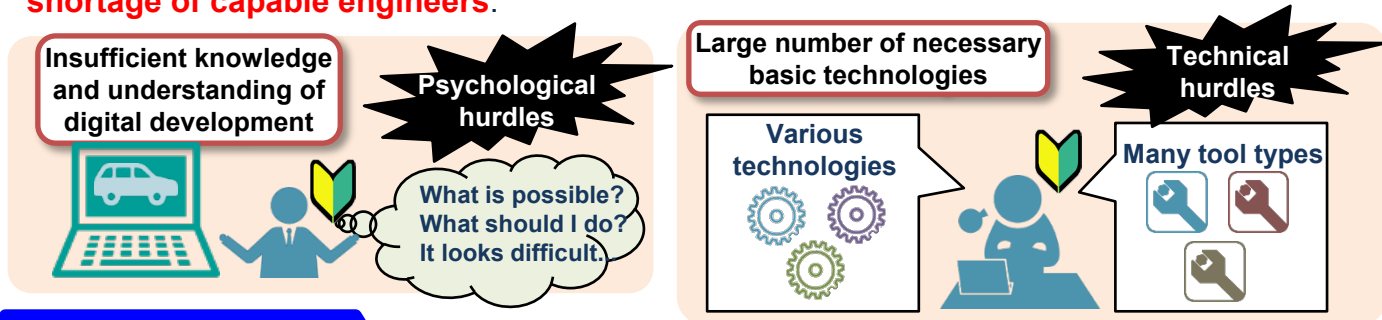
Support for Training of XILS Engineers

* XILS: General term for closed loop simulations such as MILS, SILS, and HILS

TTDC provides training for engineers based on its experience in the XILS architecture business.

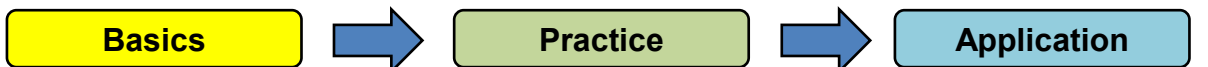
1. Issues

With the use of XILS expanding as digital development accelerates, a lack of understanding about digital development and the large number of technologies to be mastered is causing a **shortage of capable engineers**.

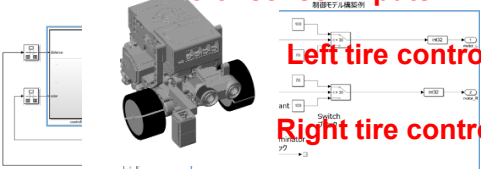


2. Solutions

- **Hands-on** engineer training that **provides a specific outline of how to use XILS**



Color sensor inputs



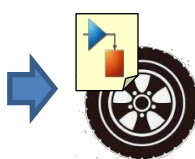
$$I_a \frac{d\omega_a}{dt} = T_m - R_w F_d$$

$$m \frac{dv_d}{dt} = \tilde{F}_d - F_r$$

$$F_d = W_r \mu_d$$

$$F_r = R_r + R_a$$

$$\lambda = \frac{R_w \omega_a - V_b}{\max(|V_b|, |R_w \omega_a|)}$$



Basics of XILS construction

Practical XILS construction

More rapid simulations

Basics of MBD

Physical modeling

Coupling of simulations

Learn the basic knowledge.

- What is MBD?
- How to use MATLAB/Simulink

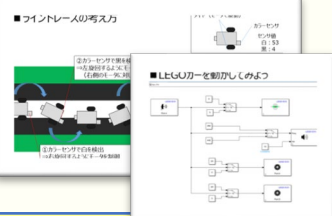
モデルベース開発ってなに？

『モデルベース開発』
= 仮想空間の中で、モノづくりを進めていく方法
⇒ 数学、物理、プログラミング、CGを活用！



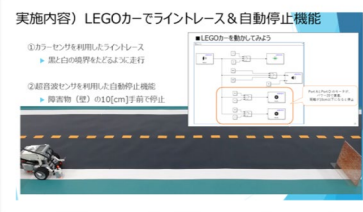
Simulations

- Construct MILS using Simulink.
- Confirm using animation.



Actual model verification

- Implement models using Lego.
- Compare actual models with simulations.



Contact for Digital Development Center support
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