Title of the Presentation

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HELMHOLTZ
RESEARCH FOR GRAND CHALLENGES

KIT
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Outline

1. Bullet Point Section
2. Block Section
3. Formula Section

Bullet Point Section

Enumerations

1. Bullet point 1
   - Bullet point 1
   - Bullet point 2
   - Bullet point 3
2. Bullet point 2
   - Bullet point 1
   - Bullet point 2
   - Bullet point 3
3. Bullet point 3

Block Section

Blocks

Regular Block

- Bullet point 1
- Bullet point 2

Example Block

- Bullet point 1
- Bullet point 2

Alert Block

- Bullet point 1
- Bullet point 2

Formula Section

Mathematical Slides

We have an **objective function** $f : \mathbb{R}^k \to \mathbb{R}$

$$\max_x f(x)$$

$[x = (x_1, \dots x_k)]$ subject to some **constraints** within $\mathbb{R}^k$:

$$\begin{aligned} g_i(x) = c_i \quad &\leftrightarrow \quad \lambda_i \quad i = 1, \dots n \\ h_j(x) \leq d_j \quad &\leftrightarrow \quad \mu_j \quad j = 1, \dots m \end{aligned}$$

λ_i and μ_j are the **KKT multipliers** (basically Lagrange multipliers) we introduce for each constraint equation; it measures the change in the objective value of the optimal solution obtained by relaxing the constraint (shadow price).