You are tasked with developing a PLM system for a new product. Your team has identified several key components that are essential to its success. However, some components are missing, and you need to figure out the correct sequence and relationships among them.

Components:

1. **System Architecture**

2. **Information Models**

3. **Product Structure**

4. **Product Information Data Model**

5. **Product Model**

6. **System Functionality**

7. **Reasons for Deployment**

Clues:

- **Clue 1:** The system's overall design (1) must support how data is organized (2) and how it relates to the physical form of the product (3).

- **Clue 2:** Before you can fully understand the product (5), you must first establish what information you need to collect (4).

- **Clue 3:** The reason for implementing the PLM system (7) is often driven by the need to improve the functioning of the entire system (6).

- **Clue 4:** The product structure (3) connects directly with both the product information data model (4) and the product model (5).

Question:

1. Based on the clues, can you arrange the components in the correct sequence from start to finish in the development of the PLM system?

2. Explain the relationships between at least three of the components.

Answer Key:

1. **Correct Sequence:**

   o System Architecture (1) → Information Models (2) → Product Structure (3) → Product Information Data Model (4) → Product Model (5) → System Functionality (6) → Reasons for Deployment (7)

2. **Relationships:**

   o The **System Architecture** (1) is foundational as it dictates how the system is designed to process and manage information.

   o **Information Models** (2) provide the framework for data organization, which is critical for developing the **Product Structure** (3) that outlines the hierarchical relationships within the product.

- Understanding the **Product Information Data Model** (4) is crucial before creating the **Product Model** (5), as it specifies what data must be included to accurately represent the product.