LECTURE 4.

Production logistics

- Material flow on its way from the primary source of raw materials to the end user runs a number of production units. **Managing of material flows** at this stage has its own specifics and is called **production logistics**.
- **Production logistics** - ***to provide qualitative, timely and complete production*** according to economic contracts, reducing cycle times and ***optimization of production*** costs.

The purpose of production logistics is to optimize material flow within enterprises. Participants of the logistics process within the manufacturing logistics associated industrial relations. **Production logistics system** are: • industrial company; • wholesale company; • freight station; • sea port, etc.

The objects of production logistics: industrial companies; wholesale enterprises with storage facilities; and other freight stations.

- **Functions of production logistics**

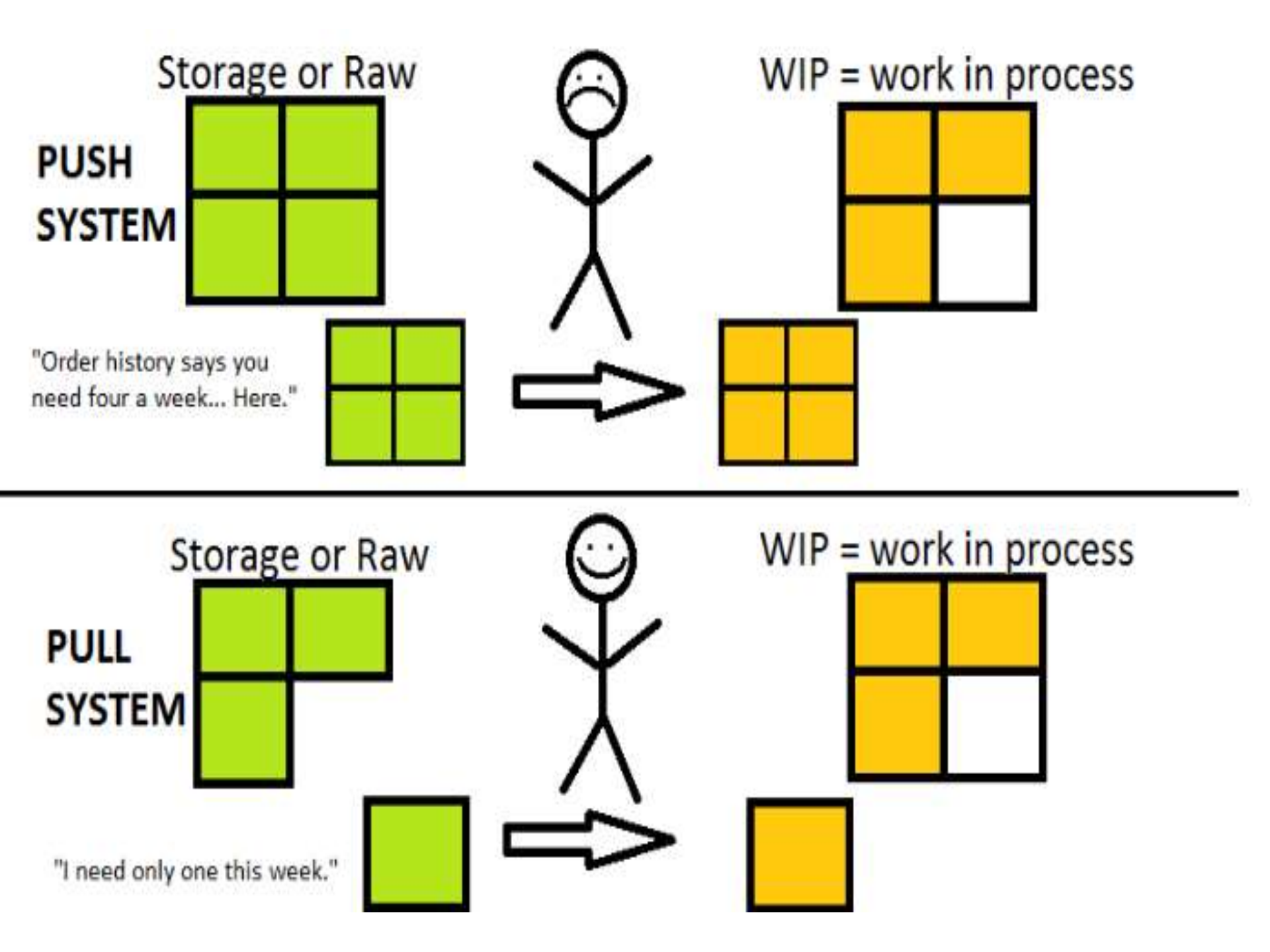
Materials Management in the enterprise involves the following functions.

- **Coordination of actions of participants of the logistics process** is to formulate and bringing materials management purposes to individual units, in accordance with the purposes mentioned global enterprise objectives and ensuring on this basis, the joint coordinated work of all parts of the supply chain.
- **The organization of material flow in production** involves the formation and establishment of spatial and temporal relationships between the participants of movement of goods, as well as the creation of materials management system in the enterprise.
- **Material Flow Planning** involves performing sub-functions such as scientific, technical and economic forecasting, development of programs of action and detail plans. Prediction precedes the development of plans and preparation of action programs. It has the task of assessing future trends in the state of in-plant logistics system.

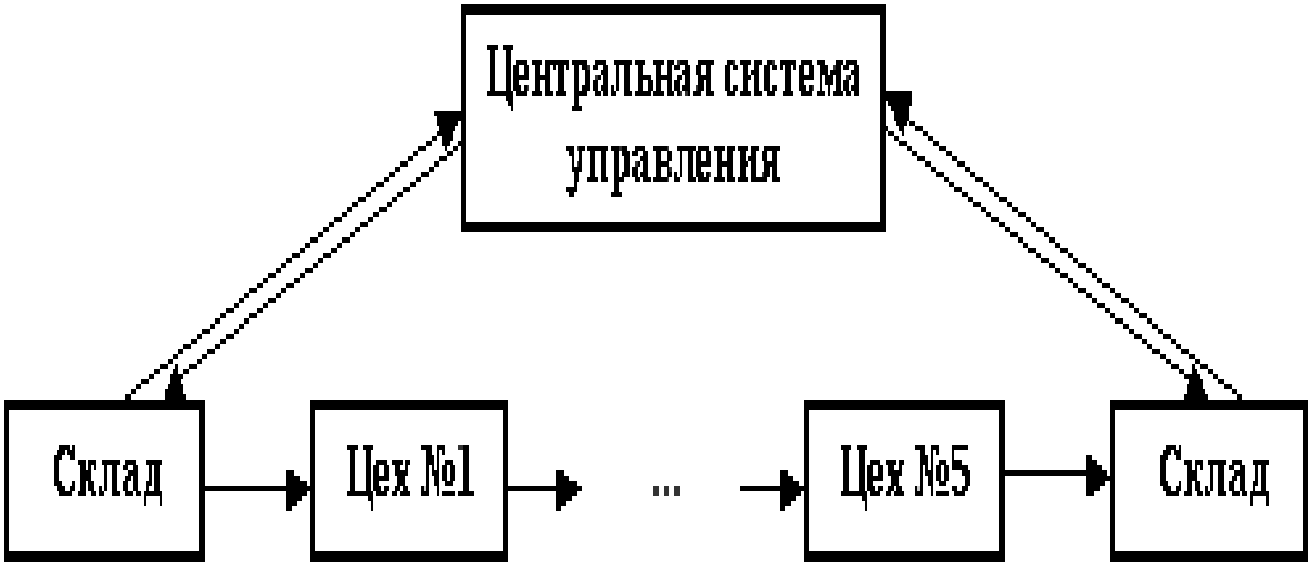
The push and pull control systems

Materials Management within the internal production logistics systems can be done in two fundamentally different ways: through the "push" or "pull" of the order.

The push system is based on the prediction of stocks of raw size, materials, details for each link of the logistics chain. Based on this forecast, it manages the entire multi-step manufacturing process by providing a justifiable amount of stock material at each stage of processing. With this system, material flow control objects of labor are moved from one area to another (following the technological process) regardless of its readiness for treatment and the need for these items, without a corresponding order. Material flow, as it were "pushed" to the recipient on the team, coming from the central production management systems

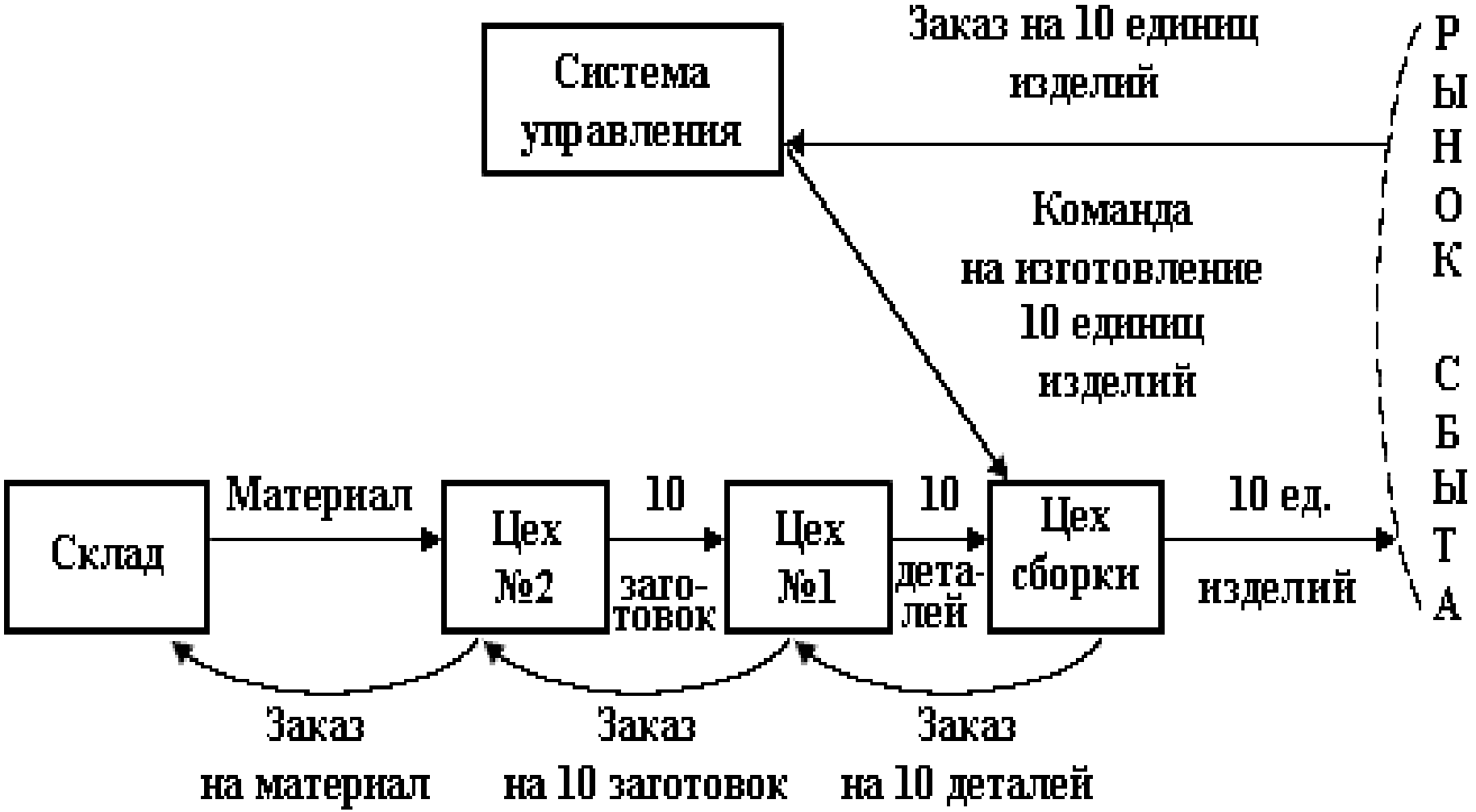

Storage or Raw
WIP = work in process
PUSH
SYSTEM
"Order history says you need four a week... Here."
Storage or Raw
WIP = work in process
PULL
SYSTEM
"I need only one this week."

PUSH SYSTEM



- **Pull system** requires the maintenance of minimum stock levels at each stage of production and the order of the subsequent movement to the previous section. The subsequent section orders the material in accordance with the norm and the time of consumption of their products. The schedule of work is set only for the site (plant) consuming. Planning The manufacturer has no specific timetable and plan and works in accordance with the received order. Thus, only those parts are made, which actually needs and only when the need arises.

PULL SYSTEM


Система управления
Заказ на 10 единиц изделий
Рынок сбыта
Команда на изготовление 10 единиц изделий
Склад
Материал
Цех №2
10 заго-товок
Цех №1
10 дета-лей
Цех сборки
10 ед. изделий
Заказ на материал
Заказ на 10 заготовок
Заказ на 10 деталей

Pull System Example