Hvernig virka message queues... til hvers Kafka..

Undir hvaða kinrgumstæðum gæti message queue hjálpað okkur að gera app meira efficient..

**Forward messages between processes (same machine or network).**

**Producer and consumer..**

Producer sends message to **message queue**.

* Makes process communication **platform independent** and **programming language independent**. Makes it easy for a process to send a message to another (perhaps to delegate work).
* Can move logic out of request scope to be **executed asynchronously**. So if we want to give a user his response fast (and do some work irrelevant to the user after) we could send his input on the message queue for some consumer to process it and send a response to the user right after that.
* (Really emphasising point 2): If you‘re ordering something.. say you need to save the results to both Navision and AX after the sale. You can send the details on the message queue and have both those systems process it on their side, and just focus on what you do, *handling requests* *fast*. Not making users wait for work they don‘t care about.
* Makes the logic in the request scope simpler.

F.ex. online store API..

POST order to DB, we write the details to DB and write the generated order ID back in the response.

Later.. more departments.. sales department uses SAP for statistics.. and marketing something else.. for each order. These systems **need to be notified** when an order comes through our API.

1. We write the order to the database
2. Get the generated ID
3. Create a message and add it to the order queue
4. Write the order ID back to the client

Sendir message á ákveðið topic.. **GROUPS:** Consumers hafa groupId.. ‚myGroup‘.. þessi consumer er hluti af group-u.. EF ALLIR MEÐ SÖMU GROUP... **BARA 1 Í GROUP SÉR SKILABOÐIN**.. Ef ekki sama.. ALLIR..

Sendir á eitthvað topic.. Kafka ekki message queue.. tekur ekki bara af queue..

Er straumur.. getur spólað til baka í straumnum..

Búum til kafka topic..