Along the progress of the game and the growth of the towns, it's important for the satisfaction of its denizens that they'll be provided with goods all the time. It's the stock level of goods at the market hall that's decisive for whether people are satisfied. Denizens help themselves from there on a daily basis in order to satisfy their needs for all the twenty goods for the next twenty-four hours. A shortage, meaning a supply that won't suffice for a day, in one or even several goods will negatively affect local satisfaction. Furthermore it's important for the populace that stocks won't just do for a day, but that they'll do for several days as they can't count on new supplies arriving every day. The price is the criterium the populace takes as a means to guess the long-run availibility of the goods. A high price equals a short supply of goods at the market hall, a low price equals a big supply that may do for several weeks. The higher the price, the less satisfied denizens become with their provision, even if they can fully satisfy their daily needs. This means that the populace looks at two things: Provision of the need of the day and the long-run security of supply. Satisfied denizens are inevitable if you desire the have a growing game, meaning you can't expand without organising the provision of your towns.

Here we are with the weekly demands of the Hanse's denizens. The poor, the affluent and the rich will consume different amounts of any good. For any class and any good you'll see the consumption of 1,000 peers in their respective unit. Any dates are therefore to read as „1,000 affluents demand 1.4 loads of wool a day“ or „1,000 poor demand 22.75 barrels of beer a day“. Nota bene: Demand for timber and skins is 20 per cent higher in winter (i.e. December 1 – February 28).

Good	Rich	Affluent	Poor
Beer	22.750	45.500	22.750
Bricks	0.035	0.035	0.000
Cloth	17.500	12.250	5.250
Fish	1.400	2.800	3.500
Grain	3.150	4.200	5.250
Hemp	0.175	0.105	0.070
Honey	17.500	8.750	1.750
Iron goods	35.000	26.250	8.750
Leather	15.400	12.250	1.750
Meat	3.850	3.050	0.450
Pig iron		None!	
Pitch		None!	
Pottery	10.500	6.300	4.200
Salt	0.350	0.350	0.350
Skins	21.000	10.500	0.000
Spices	1.400	0.700	0.700
Timber	2.800	2.800	1.400
Train oil	17.500	12.250	3.500
Wine	52.500	13.300	0.000
Wool	0.350	1.400	0.700

It's a bit tedious to calculate the weekly consumptions of a twon by adding the demands of the three classes. You may therefore also apply some „rules of thumb“ in regard to the demands of a „typical“ town by extrapolating demands for a suitable class structure (usually 70 per cent poor, 20 per cent affluent and 10 per cent rich) up to 1,000 denizens. True, you may enormously reduce the time to calculate demands for the convoys in question that way, but it comes with a price of applying inaccurate data in the case that class structure diverges from the aforementioned standard. In the charts to the right we applied a „typical“ class structure for making educated (but still inaccurate!) guesses about the demands of city (once again for 1,000 denizens).

Good	Amount
Beer	29
*Cloth**	9
Fisch	3
*Grain**	5
*Hemp**	1
Honey	6
*Iron goods**	19
*Leather**	9
Meat	2
Pottery	6
Salt	3
Skins	6
Spices	1
*Timber**	2
Train oil	8
Wine	11
*Wool**	1

The goods marked with asterisks show a demand that will, of course, also depend on the public facilities in town. Town-owned plants also demand goods for input that haven't been shown here. Out of these date, you can guesstimate the demand for a deliberate number of denizens by multiplying the number with the population divided by 1,000.

--- THE HUB SYSTEM ---

Along with the grown of the economy in the Hanse and the corresponding growth in the flow of commodities (provisional goods, raw material for productions and production itself), the player will need a system to efficiently organise stockage and distribution of their goods. The point-to-point routes popular among beginners running through wider regions definitely won't suit this obstacle. Most lately whenever your enterprise is engaging in the entire Hanse, it will rather make sense to create a hub. Its basic mode of operation is like that: All the goods produced or purchased by the player get stocked in the hub and re-distributed thereof into all cities again. This system can be exercised in multiple interations: one hub (so-called Central Hub), two hubs (North Sea and Baltic Sea) or multiple hubs (so-called Regional Hubs), though hardly more than four.

Before getting into detail with the installation of such a system, here we go with three recommendations in regard to choice of site and formation of the hub: As the (central) hub constitutes the common destination of all providing convoys in the entire Hanse, it also suits as a common site of repair. That's why Hanseatic towns and offices (trading stations) suit better for this purpose than Hanseatic factories as the latter only feature a repair dock rather than a wholesome shipyard. Mere repair docks can't be used for building new ships and this rather disadvantages them in the speed of repairing ships compared to „real“ shipyards. The disadvantage measures 18 to 5 in the beginning when it's really a disturbance. Hubs aren't merely economic centres in the gameworld with especially happy citizens enjoying the best provision, but they're also political and technological centres. Due to perpetual repair, they will be first towns to spit out hulks and they'll be the easiest town to become mayors in. So it's worth to considerate to either install the hub in your hometown or to move your hometown into the prospective hub.

We also note that a hub needn't (in practice won't at all) be plastered over with warehouses. It may suffice in the beginning to build five or six of them to cut stocking costs. Later when it's about

stocking hundreds of thousands of loads, it won't be possible to build that many warehouses to avoid renting space entirely. Not only won't it be possible, it will also no longer be necessary as the said rents won't make a remarkable difference anymore in an already progressed game. Even worse, warehouses waste space that could otherwise be used for dwelling units.

--- HOW IT WORKS ---

The hub system may be best understood by employing a concreet example. We have a town as a hub and for any other city there'll be an autoconvoy commuting between it and the hub. The convoys will fetch and deliver. An example for the standard map: Stettin is connected to the hub in Lübeck and the player produces beer, hemp and fish in Stettin. So the convoy for Stettin will fetch these three goods in Stettin and unload them in Lübeck. Other convoys may e.g. fetch grain, beer, leather, hemp and meat from Gdansk; and fetch iron goods, skins, leather, meat and grain from Reval. All these goods will be consolidated in the office of Lübeck. When these convoys sail back to their destinations, they will fetch all the goods that won't be produced there. So the Stettin convoy will fetch portions of everything but beer, hemp and fish. You see that the biggest adventage of the hub system is its clearliness which makes coordination easy. On the other hand, you need more vessels on your hands, especially if you employ only one single hub. And the standard map is considered notorious for featuring no really suitable hub.

--- USUAL ITERATIONS ---

All mentioned examples relate to the standard map.

One Hub

Probably the most used iteration is one central hub. One single hub is most convenient for the player as they will only have to look into one office to keep an eye on the overall shortages and surplusses. On the other hand, voyages become very long especially towards the edges of the map and this equals an especially high want in vessels. Also remember than a commodity won't make money when onboard. Turnover of goods slows down enormously and marks the trade-off in regard to the easy maintenence of the one-hub system. A single hub must be placed as centrally as possible because provisions otherwise lose their steady character. A single round from Ripen to Novgorod and back may already take three weeks, let alone up to four weeks when starting from London or Bruges (or worse, Cologne). The most suitable candidates would be Aalborg, Malmö and Rostock. Aalborg ist more accessible to the western edges (Cologne, Bruges, London) than Malmö, but less so to the eastern edges of Ladoga and Novgorod.

With a crayer at 99 per cent health, 8 sailors onbord and no captain, the following travel times can be observed at game speed „very fast“ that matches 20 seconds for one day in the game.

Aalborg:	91 seconds to Cologne,	139 seconds to Novgorod
Malmö:	111 seconds to Cologne,	117 seconds to Novgorod
Rostock:	120 seconds to Cologne,	129 seconds to Novgorod

One can quickly see that times are much more equal from Malmö and Rostock than from Aalborg. This is at least a guesstimate that both cities lie more central. Journeys from Rostock may take a bit longer than from Malmö because Rostock lies off the main route between east and west through the Kattegat and therefore constitutes kind of a detour. On the other hand, Rostock is a full-fledged Hanseatic town with a shipyard instead of just a dock and provides the option of building new

ships, improving repair times even more vis-à-vis Malmö. As the hub is also the repair depot, this will be an important aspect to consider as a dock will need a year at minimum to get to the best levels, i.e. shortest repair times, even at intenstive levels of „shipyard training“. Rostock also offers the possibility of direct trade with the local count. If Rostock has been chosen as a hometown, surplusses may be directly sold instead of getting them shipped first as would be the case with a hub at Aalborg or Malmö.

Two Hubs

Warning: The more hubs you install, the less handy the flow of commodities will become. With two hubs, you'll ideally install one hub in the North Sea, maybe in Bremen, Ripen or Groningen, and the other hub in the Baltic Sea, maybe in Lübeck, Stettin, Malmö, Bisbee or Gdansk. This alone will already remarkably shorten the routes to the respective hubs. Additional convoys will commute between the hubs to compensate discrepancies. Skins are concentrated in the Baltic Sea, wine in the North Sea, constituting the most important goods to be balanced. But it's also an option to export iron goods from the Baltic Sea to the Mediterranean Sea. Here they'll first be consolidated at the Baltic Sea hub, then shipped to the North Sea hub and then shipped to Med with the possible transit stop at an expedition harbor like London or Bruges.

Often two hubs form almost from their own if somebody makes his hometown a hub. As the hometown will often not be central enough to make a good central hub, you choose a counterpart at the other half of the map, making the start of a two-hub system. This will in most cases be a compromise between convenience for the player and efficiency of provision. The workload for administration may be higher due to the compensation of regions, but stays doable. More than two hubs may be undesirable due to the less clear overview as more goods have to be compensated among the several hubs.

Multiple Hubs

In this system, the Hanse gets divided into several zones (four in most cases) that are supposed to work as independently as possible from the other zones. An examplary subdivision might look like this:

Zone A: Lübeck, Rostock, **Stettin**, Malmö, Gdansk, Thorn
Zone B: Riga, Bisbee, Stockholm, **Reval**, Ladoga, Novgorod
Zone C: London, Bruges, Cologne, **Groningen**, Bremen, Hamburg
Zone D: Scarborough, Edinburgh, Bergen, Oslo, **Aalborg**, Ripen

The bold styled town make the regional hubs. Here the workload for the player will of course be heightened as four zones are to be managed and more goods want to be moved among the regions. In this case, zones A and C won't have effective pig iron whereas D is rich in pig iron, but lacks effective grain. On the other hand, wants of vessels and journey time shrink to the minimum. If the player is ready to take this extra in management, he'll have a very efficient system in his hands.