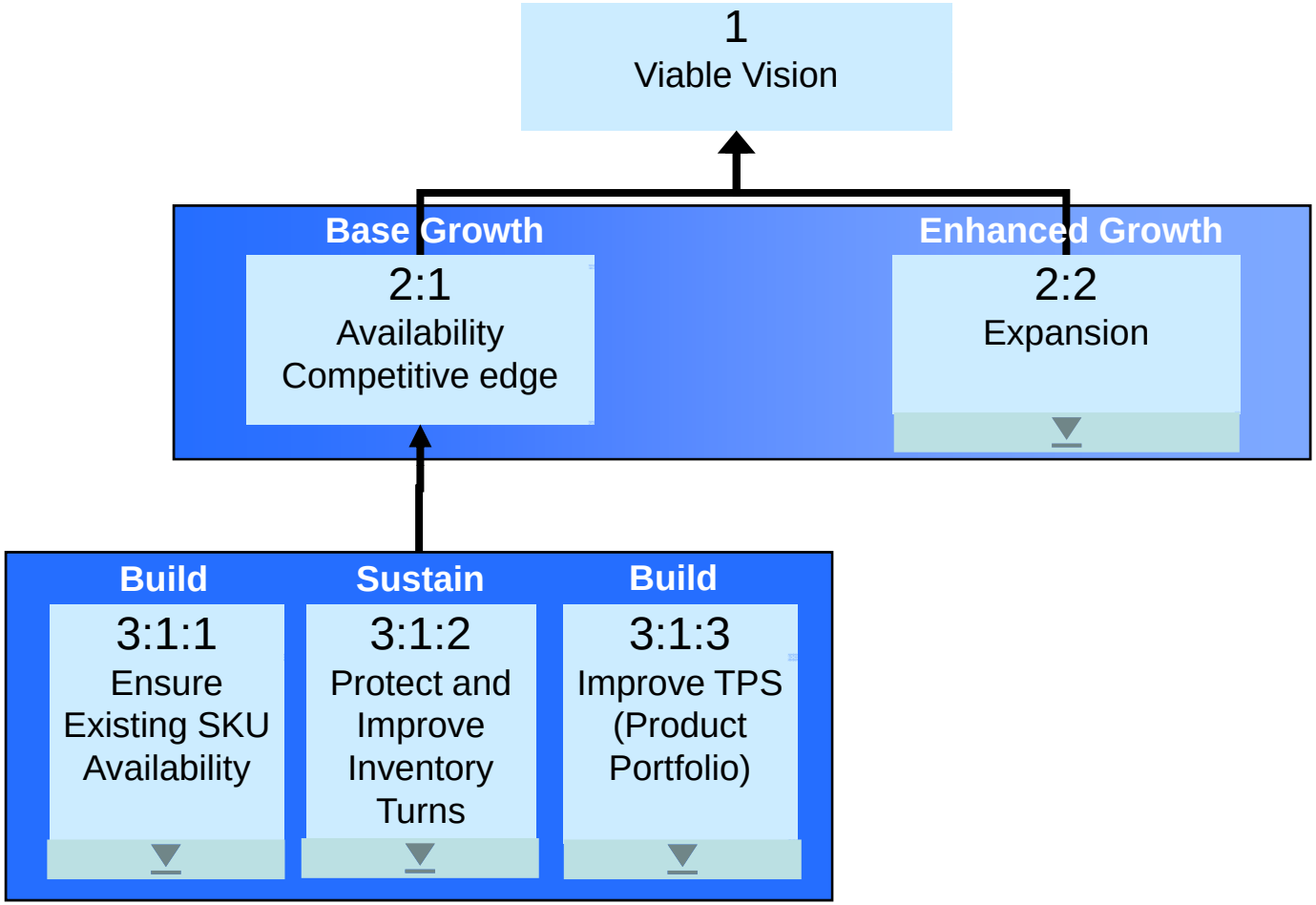
The Strategy & Tactic tree

Retailers

Viable Vision implementations

Retailer S&T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Base Growth
2:1
Availability
Competitive edge
Enhanced Growth
2:2
Expansion
Build
3:1:1
Ensure
Existing SKU
Availability
Sustain
3:1:2
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Inventory
Turns
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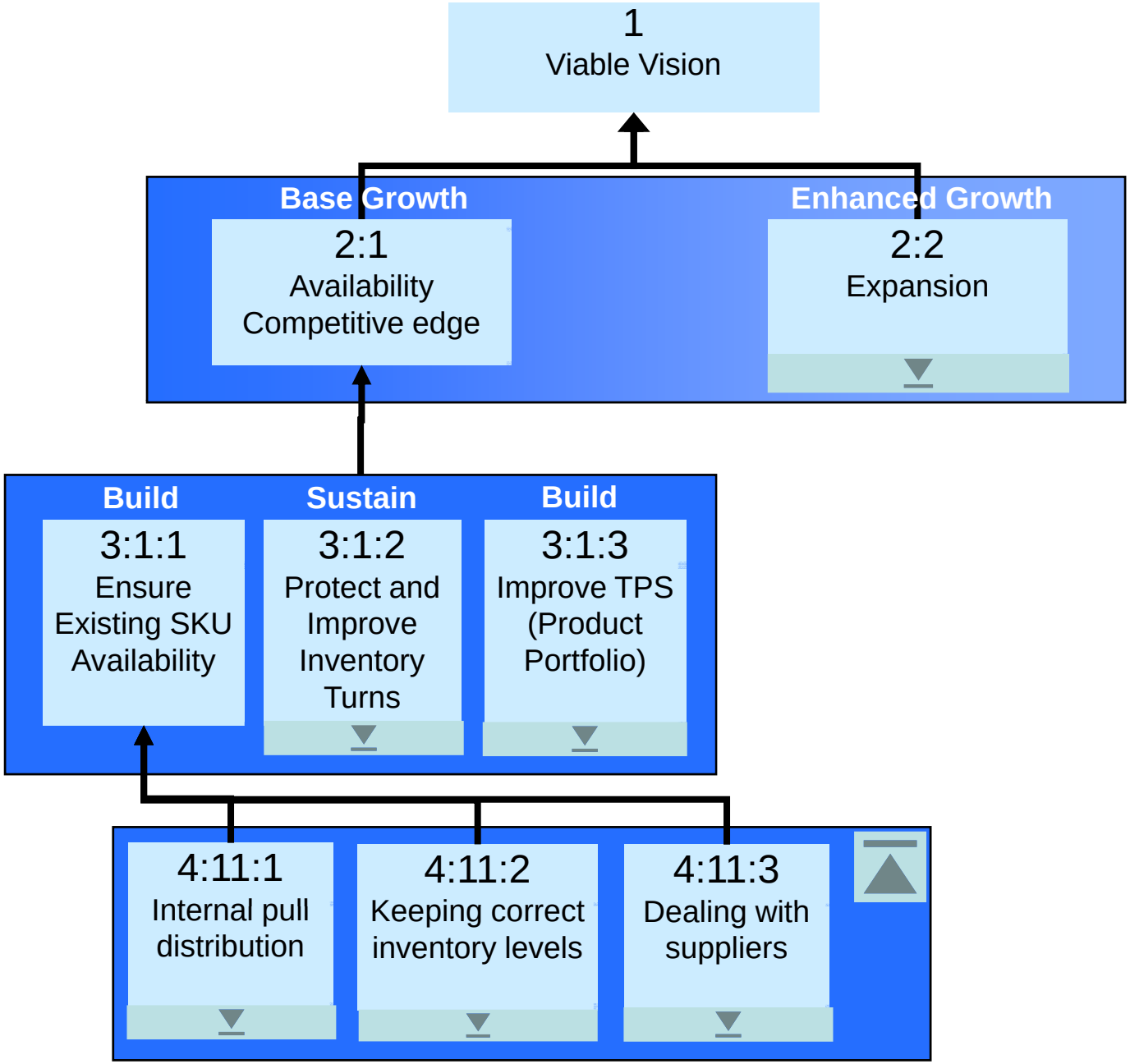
3:1:3
Improve TPS
(Product
Portfolio)

Retailer S&T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Keeping correct
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Dealing with
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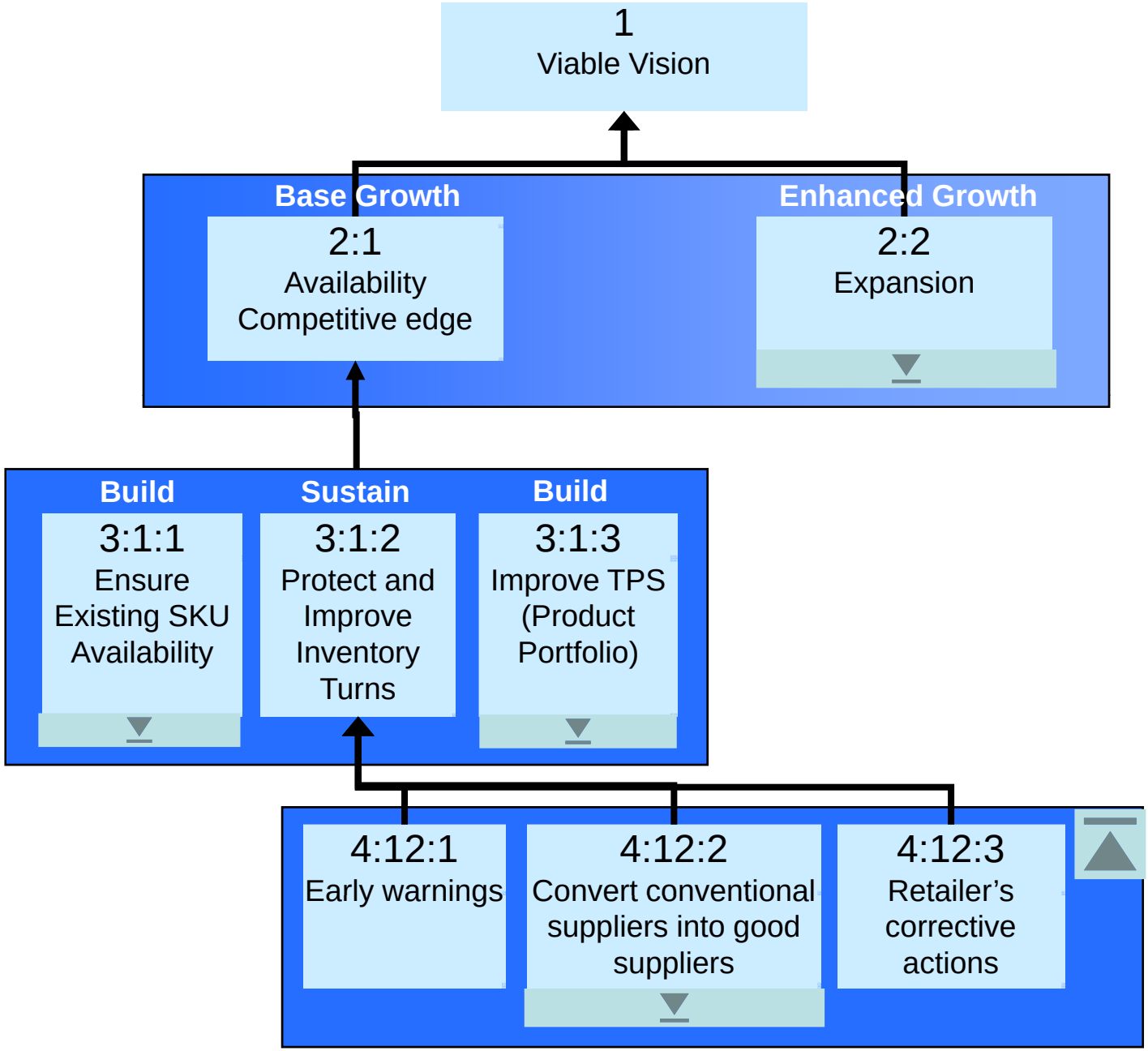
Retailer S&T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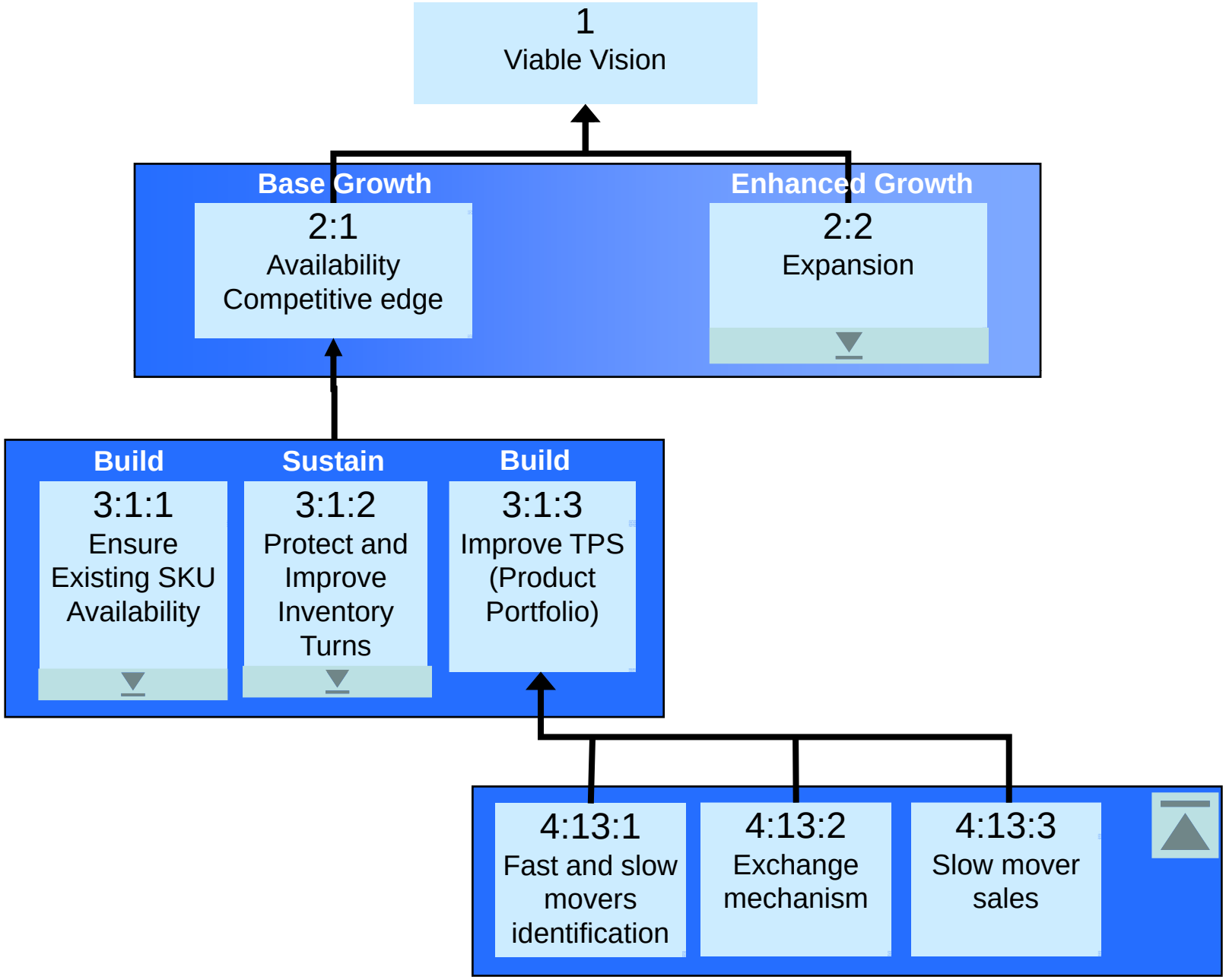
Retailer S&T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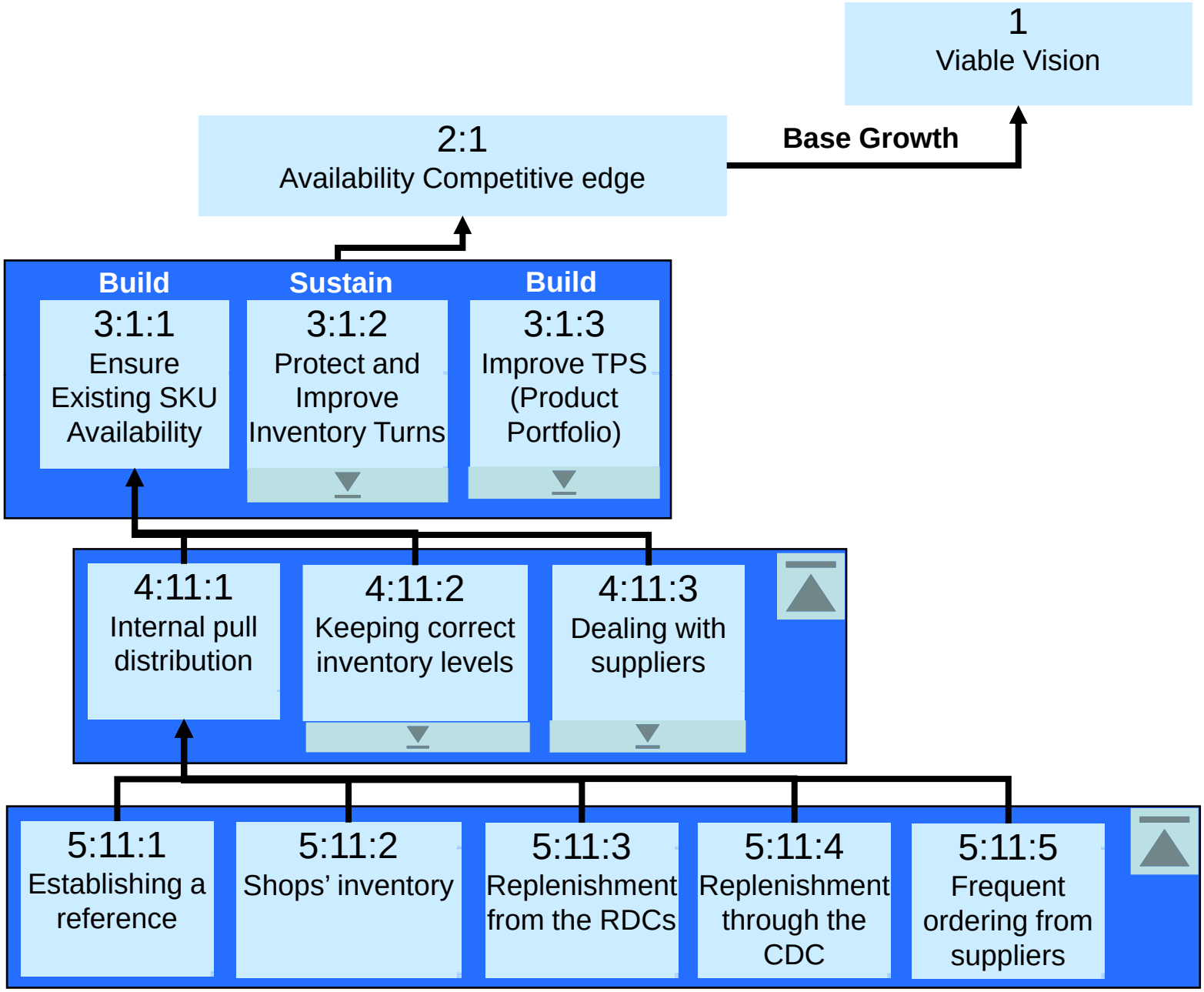
Retailer S&T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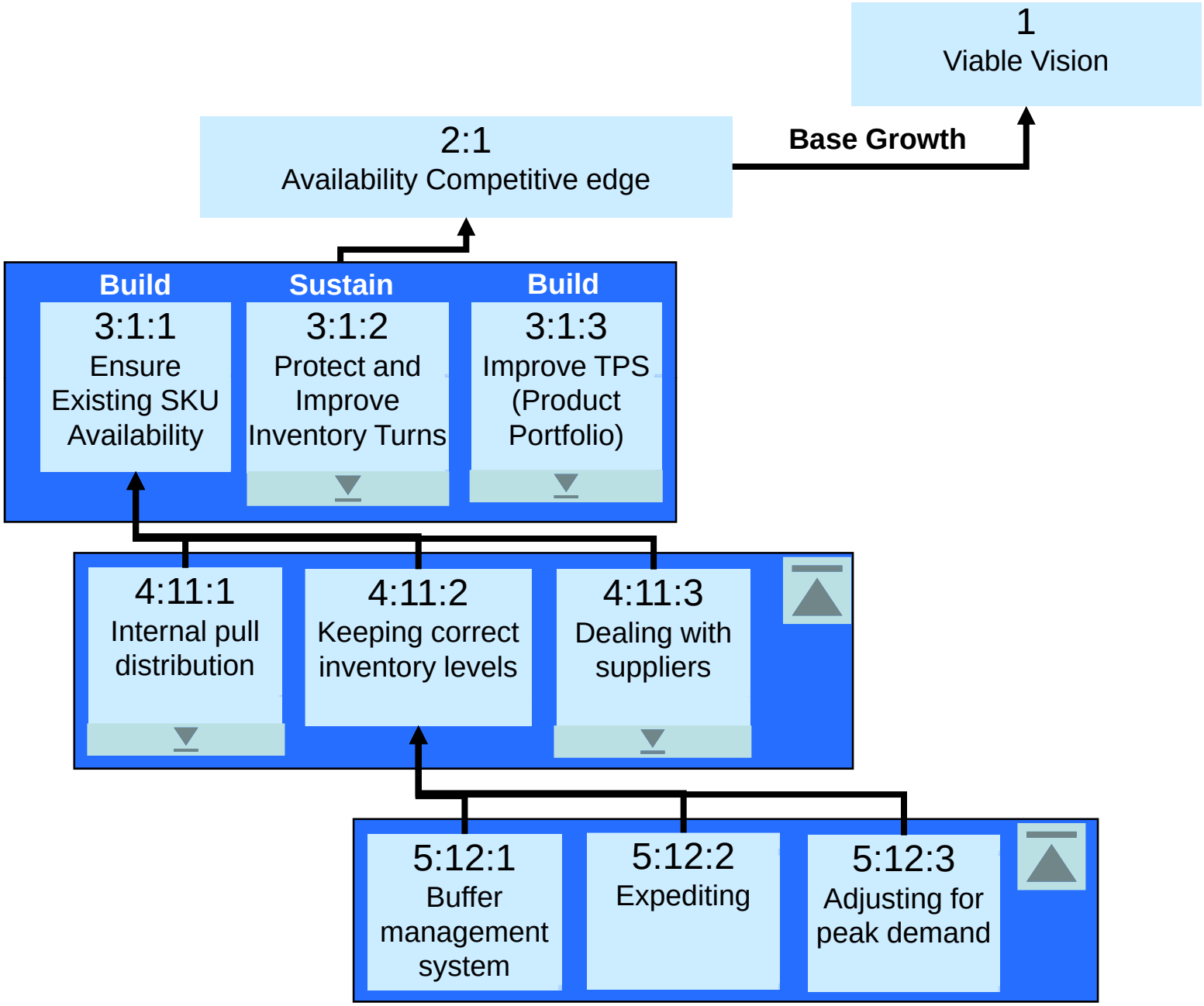
Retailer S&T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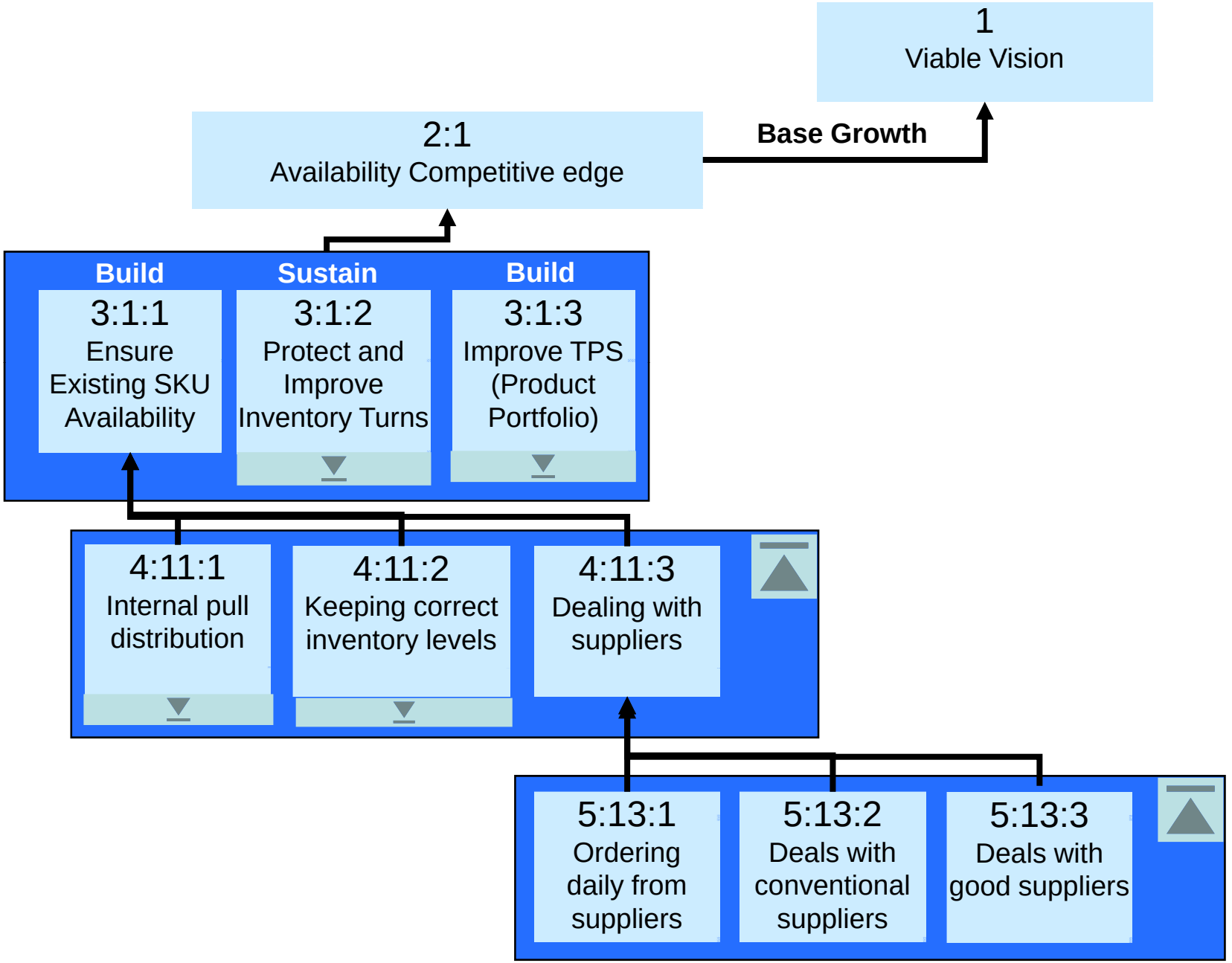
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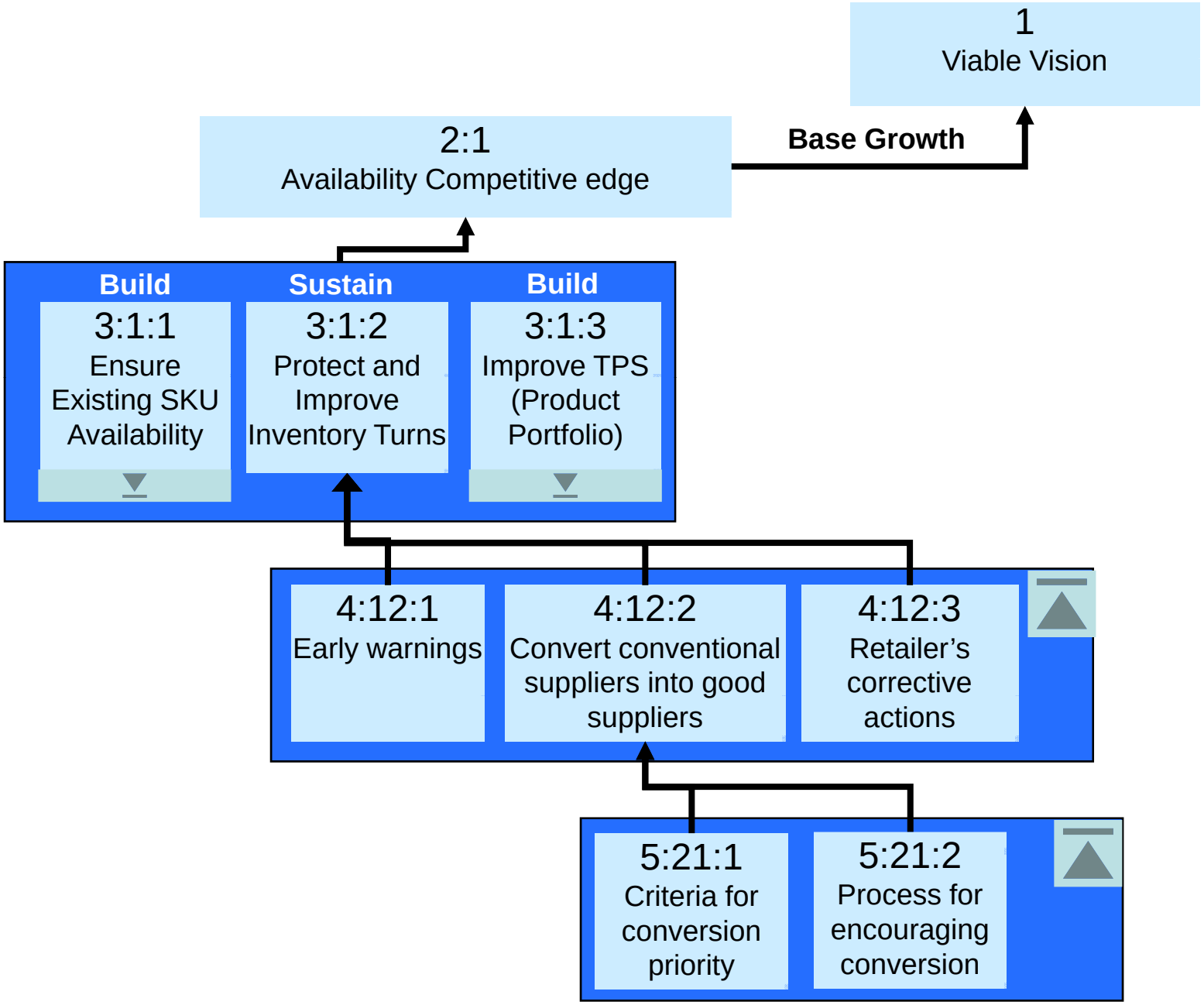
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1	Viable Vision
Strategy	(The Company is solidly on POOGI) The Viable Vision (VV) is realized in four years or less.
Parallel assumptions	➢ For a company to realize the VV its T must grow (and continue to grow) much faster than OE. ➢ Exhausting a company 's resources and/or taking too high risks severely endangers the chance of reaching the VV.
Tactic	Build a decisive competitive edge and the capabilities to capitalize on it, on big enough markets without exhausting the Company 's resources and without taking real risks.
Sufficiency assumption	The way to have a decisive competitive edge is to satisfy a client's significant need to the extent that no significant competitor can.

2:1	Availability Competitive Edge
Necessary assumptions	➢ Better availability is a consumer's significant need. ➢ Expecting to find an SKU and being disappointed severely erodes the consumer's impression of good availability. ➢ Shelf space is usually the shop's constraint for better availability. A significant amount of the constraint is captured by merchandise that were ordered according to an overly optimistic forecast. ➢ Offering many products that the market doesn't want is not contributing to the impression of availability. When the product's market-life is not long, the slow reaction time of the supply chain causes the offering to be based more on educated guesses, rather than on actual market preferences. ➢ For a short shelf-life product, every additional day the products spends on the shelf the customers' impression of availability deteriorates.
Strategy	A decisive competitive edge is gained by the market knowing that the Company's availability is remarkably high, when all other parameters remain the same.
Parallel assumptions	➢ Besides poor quality, shortages are the main reason for a consumer's disappointment. ➢ The current mode of operation of most supply chains, a mode of operation that is based on forecast, causes the supply chain to have a long replenishment lead time. A long replenishment time causes shortages and high inventories that block the shelf space and impair the ability to adjust the offering to the actual market preferences. ➢ Shortages and high inventories do not only erode availability, but also (dramatically) reduce sales and increase investments. (Cont'd)

2:1	Availability Competitive Edge (Cont'd)
Parallel assumptions (Cont'd)	➢ Using TOC Pull-distribution – switching to a mode of operation which is based on actual consumption – together with a proper incentives scheme to the suppliers (or better, to have suppliers which use the same consumption-based mode of operation), ensures very high availability coupled with surprisingly high inventory turns.
Tactic	The Company switches (from a forecast-driven mode of operation) to an effective consumption-driven mode of operation.
Sufficiency assumption	Building a decisive competitive edge is not easy; Still, the real challenge is the ability to sustain it.

2:2	Expansion
Necessary assumptions	➢ Excellent additional personnel are not easy to get. ➢ Major expansion requires large investments and credit is not unlimited. ➢ An established brand-name in one market is not easily carried outside the boundaries of that market (into new regions or new product sectors). And it takes considerable time, money and efforts to establish a significant brand-name.
Strategy	The Company rapidly expands without taking real risks and without exhausting its resources.
Parallel assumptions	➢ When operations follow excellent processes (simple, effective and robust) it is relatively easy to train good personnel to become excellent personnel. ➢ When a retailer consistently operates with very high inventory-turns the investment to open a new shop is considerably lower. ➢ When a company has a recognized and established competitive edge and, as a result, all its performance (financial performance such as profit, percent of profit on sales and ROI, as well as operational performance such as inventory turns and TPS) are much above the industry norm the Company doesn't have real difficulties in raising investments. ➢ When a company has outstanding performance and excellent procedures, the company can successfully attract and operate a franchisee network. ➢ Opening, within a relatively short time, a large number of shops in a given region is an effective way to create a brand name.
Tactic	The Company plans and executes a PRUDENT expansion plan.
Sufficiency assumption	Considering non-existing obstacles is almost as bad as not considering real obstacles.

3:1:1	Ensure Existing SKUs Availability
Necessary assumption	The situation of almost all retailers is that in spite of constant efforts, for many SKUs the inventories are apparently too high, while for some SKUs there is no inventory.
Strategy	The Company has high inventory turns; still – for each SKU – it always has enough inventory on its shelves to satisfy immediately any reasonable demand.
Parallel assumptions	When a retailer: 1. Holds in the shops enough inventory only for proper visual display plus what is needed for the demand (optimistically) expected within the replenishment time (transportation time from the regional distribution center (RDC)), and 2. Holds in its warehouse(s) (RDCs and CDC) enough inventory for just the expected* demand within the replenishment time, and 3. Guides its suppliers (manufacturers) according to actual daily consumption rather than batched orders, and 4. Gives its suppliers proper (monitored) incentives to improve performance (lead time and due dates), and 5. Monitors and adjusts its inventory targets according to TOC Buffer Management, the retailer is able to provide very high availability while holding much lower inventories, thus resulting in high inventory turns. --- * Some level of paranoia (not hysteria) is recommended.

3:1:1	Ensure Existing SKUs Availability (Cont'd)
Tactics	➢ The Company switches its internal logistics from push to pull according to actual daily consumption. ➢ The Company implements TOC buffer management to monitor and adjust the target inventories in its shops and its warehouses. ➢ The Company provides daily consumption orders to its suppliers and incentives to deliver, with shorter lead time, on time.
Sufficiency assumption	To ensure an outstanding start of a major initiative it is vital that the first substantial actions will result in immediate substantial benefits.

3:1:2	Protect and improve inventory turns
Necessary assumptions	➢ When sales are (constantly) growing, the protective capacity of some suppliers may become too low. When protective capacity is starting to be depleted the replenishment lead time elongates. When replenishment lead time elongates there is a need to increase the inventory targets. The act of increasing inventory targets puts additional load on capacity - protective capacity is drastically reduced. The resulting vicious cycle causes the retailer to suffer from many shortages for a long time. ➢ Buying from good suppliers enables the retailer to protect and further improve its inventory turns due to the good supplier's capabilities: 1) their lead time is shorter (shorter production lead-time and an effective plant warehouse), 2) DDP is more reliable, and 3) their ability to ensure that their protective capacity is always sufficient. ➢ Good suppliers are rare.
Strategy	The Company's inventory turns are not only rarely endangered by the by the emergence of limited capacity of its suppliers, but also are improved through the usage of more and more good suppliers.
Parallel assumptions	➢ When monitored properly, an early warning of degradation in the amount of protective capacity of the supplier can be identified. A good supplier can detect it much earlier than the retailer can. ➢ The good supplier can improve its protective capacity before the inventories of the retailer are fully depleted. (Cont'd)

3:1:2	Protect and improve inventory turns
Parallel assumptions (Cont'd)	➢ In the case of a conventional supplier, the period of unreliable supply can be significantly reduced by using, in parallel, an alternative supplier. ➢ Vast experience shows that a conventional supplier can be converted into a good supplier in a relatively short period of time (less than a year). ➢ Experience also indicates that there is an effective buy-in process for convincing suppliers to take the actions needed to become good suppliers.
Tactics	➢ The Company builds the mechanisms to monitor degradation in supplier performance and to trigger an alternative supplier to provide the needed inventories. ➢ The Company builds the mechanisms to convert more and more conventional suppliers into good suppliers.
Sufficiency assumption	The most powerful and successful way, to convince a partner to take a desired action, occurs when it is focused on ensuring win-win for all.

3:1:3	Improve TPS (Product portfolio)
Necessary assumption	When a new product line is introduced the knowledge about the appeal of the various products is, at best, just an educated guess. As a result, the amount of slow movers (products that sell mainly when a drastic reduction of price is offered) is considerable. The slow movers (by consuming shelf space and sales-force attention) impair having better availability and cause considerable lost sales.
Strategy	The Company has a mechanism for replacing slow movers with better movers.
Parallel assumptions	➢ In the shops, the constraint is typically shelf space. Maximizing Throughput per shelf (TPS) will increase profits significantly. Very slow movers and the high runners can be detected very early on. ➢ Usually a retailer purchases only a small fraction of the portfolio offered (and sold to other retailers) by a major supplier. ➢ Each shop may hold a different mix of (many) different SKUs. When there are many shops, the retailer can rapidly gain knowledge regarding which SKUs are fair movers, especially when it increases the variety offered. ➢ A consumption-based mode of operation enables ordering and receiving (without any hassle) the better-moving SKUs long before the end of the product's sales life. (Cont'd)

3:1:3	Improve TPS (Product portfolio) (Cont'd)
Parallel assumptions (Cont'd)	➢ The additional transportation costs (to send back the slow movers to the RDC and to bring them back to the shops once a drastic reduction of price is declared) is dwarfed by the increase in sales generated by having the better movers on the shelf.
Tactics	➢ The Company develops the mechanism for improving TPS by replacing slow movers with better movers. ➢ The slow movers are brought back to the shop at the end of the season to be sold at markdown prices. Note: good suppliers will not only take back slow movers and send better movers to the retailer instead, but also will track which movers are better movers using all of their data.
Sufficiency assumption	A good solution turns a problem into a realized opportunity.

4:11:1	Internal pull distribution
Necessary assumption	Having too little inventory guarantees a bad offering to clients. Having too much inventory (almost) guarantees a bad offering to clients
Strategy	The Company holds, in its shops and warehouse(s), relatively small amounts of inventories, which are appropriate to ensure availability.
Parallel assumptions	➢ The right inventory target is equal to consumption within the replenishment time, factored for variability. In addition, shops need to hold the appropriate amount of inventories for proper visual display. ➢ The shorter the replenishment time, the smaller the variability is. The bigger the aggregation, the smaller the variability is (the variability in a warehouse that feeds four locations is half the variability of each location). ➢ The replenishment time is equal to the order lead-time plus supply lead-time. ➢ The conventional practices used by most retailers cause the order lead-time to be significant, thus unnecessarily inflating the inventories and limiting the ability of the retailer to immediately react to actual consumption. ➢ The conventional practices used by most retailers push the inventories into the shops (where the variability is the highest), thus inflating the inventories and limiting the ability of the retailer to react appropriately to actual consumption. ➢ Providing the daily consumption data to the previous link reduces the order lead-time to just one day and helps to prevent over-pushing inventories from the CDC to RDCs and from RDCs into the shops. ➢ Most suppliers do not restrict the frequency of orders placed by a retailer (thus, the order lead time can be significantly reduced). (Cont'd)

4:11:1	Internal pull distribution (Cont'd)
Tactics	➢ Initial inventory targets in the shops are set according to proper visual display plus optimistic expected demand during the transportation lead time from the warehouse. ➢ The Company replenishes the shops from its RDCs, based on actual daily consumption (pure pull). ➢ Initial inventory targets in the warehouse(s) are set according to replenishment time – order, (production) and transportation lead-times. ➢ The Company replenishes the RDCs from its CDC based on actual daily consumption (pure pull). ➢ The Company orders (more) frequently from its suppliers based on actual consumption (rather than forecast).
Sufficiency assumption	An initiative should not just deliver results, but also be perceived as the cause of the results achieved; the sooner, the better.

4:11:2	Keeping correct inventory levels
Necessary assumption	With time, consumption rates are changing (even Murphy and replenishment times may change). The initial inventory targets may not be suitable.
Strategy	The target levels of inventories held at the Company's shops and warehouse(s) are always in line with the needs.
Parallel assumptions	➢ Buffer Management in Distribution is a robust mechanism that enables adjustment of inventory targets, according to the actual level of availability versus consumption, thus ensuring relatively low levels of inventory coupled with high availability. ➢ In many cases it is possible to expedite shipment by faster means of transportation or by obtaining a higher priority on the supplier's shop floor. Most times the higher associated cost is small in comparison to the revenues generated by the increased demand (which triggered the expediting).
Tactics	➢ Buffer Management is used to monitor and modify the target levels of inventory in the shops and warehouse(s) (and for expediting decisions). An increase in an inventory target triggers the same chain of actions as consumption. ➢ The Company researches the available expediting options (such as additional costs for faster route by sea or air freight, and extra fees for the supplier to expedite the Company's order) and inputs the resulting information into the Buffer Management system.
Sufficiency assumption	When a system is subject to variability, actions to deal with changes are needed only when the changes are not within the noise.

4:11:3	Dealing with suppliers
Necessary assumption	Any improvement in the replenishment time has an impact on the availability and inventories of the retailers.
Strategy	The Company has satisfactory replenishment (time and reliability) from its suppliers.
Parallel assumptions	➢ In most cases the replenishment time from suppliers is too long due to the long order lead-time of the retailer. ➢ In many cases the replenishment time from suppliers is too long due to a long production lead-time and/or low DDP of the suppliers. ➢ Good suppliers have much better performance (in terms of production lead-time, DDP, etc.) than conventional suppliers and have a plant warehouse thus eliminating the production lead-time from the replenishment lead-time and in some cases also a major part of the transportation time (a plant warehouse maintained by an unreliable supplier does not provide good protection).
Tactics	➢ The Company convinces all of it suppliers to agree to daily orders. ➢ The Company puts measures and incentives in place to motivate both conventional and good suppliers to ensure maximum availability.
Sufficiency assumption	It's easier and faster to implement a change which is based on real win-win.

4:12:1	Early warnings
Necessary assumptions	➢ The protective capacity of the supplier affects the ability of the supplier to protect the inventory turns of the retailer. Though it is not possible for the retailer to directly monitor the capacity of the supplier, it is possible to track it indirectly. ➢ An effective warning is one that is given early enough to enable prevention.
Strategy	The Company has a mechanism which ensures that it is aware of capacity limitations of its suppliers as soon as possible.
Parallel assumptions	➢ When protective capacity becomes limited, the resulting impact is worse DDP and/or increased lead time. ➢ A delay of one day is not the same as a delay of 10 days. A delay on a $1K order is not the same as a delay on a $50K order. The Throughput-Dollar-Days measurement (TDD) judges the supplier's due-date performance by summing, across all orders, the amount of time that the order is late multiplied by the value of the delayed order. ➢ The effective supply time (EST) is the replenishment time (based on due date provided by the supplier) plus three times the ratio of TDD to the total value of orders (the ratio is the average delay). (Cont'd)

4:12:1	Early warnings
Parallel assumptions	➢ The EST for conventional suppliers can increase due to the supplier giving higher priority to the orders of its other clients. ➢ The more insufficient the protective capacity is, the more EST will increase. ➢ A good supplier tracks its level of protective capacity in production and plans and reacts accordingly (thus, EST increases are minimized). ➢ A warning based on a decrease in protective capacity is faster than a warning about EST (since EST increases after capacity is already limited).
Tactic	The Company monitors the trend in ERT of its suppliers.

4:12:2	Convert conventional suppliers into good suppliers
Necessary assumption	Currently, most of suppliers that the retailer can or does buy from are conventional suppliers, not good suppliers.
Strategy	The Company effectively encourages its conventional suppliers to become good suppliers.
Parallel assumptions	➢ Since a retailer typically has hundreds, if not thousands of suppliers, not all suppliers can be converted into good suppliers at the same time. The retailer needs criteria for deciding the sequence in which to convert suppliers. ➢ Since a supplier becoming a good supplier is not just good for the retailer but, even more so, it is good for the supplier, there is an effective process for convincing suppliers to become good suppliers.
Tactics	➢ The Company constructs good criteria and use them to determines the sequence in which to approach its conventional suppliers to convince them to become good suppliers. ➢ The Company constructs and activates an effective process for convincing its suppliers to become good suppliers.
Sufficiency assumption	Pressure or intimidation may move someone but it is a recipe for bad long-term relationships.

4:12:3	Retailer's corrective actions
Necessary assumption	Preventing deterioration of availability can only be achieved when preparations are already in place to quickly react to the early warning.
Strategy	The Company has the ability to quickly purchase from alternative suppliers to protect its remarkable availability.
Parallel assumptions	➢ Companies typically have a time-consuming process for approving suppliers. ➢ When the EST of a supplier increases by less than a third, the buffers effectively deal with the increase. ➢ Actions should only be taken when the chance of damage of not taking actions is high. When the EST increases by 50%, the chances of deteriorating availability are high. ➢ Buying all the volume needed from the alternative supplier (with the lower EST) improves availability and reduces inventory. However, doing so also can damage the relationship with the current supplier. ➢ Buying part (or all) of the volume needed can give the current supplier the ability to deal with limited (temporary or not) capacity.
Tactics	➢ The Company identifies and pre-approves alternative suppliers for its different product categories to use in case the performance of any of its current suppliers deteriorates. ➢ When the ERT of a supplier's product line has increased by 50%, the Company buys some or all of the quantity needed of the relevant product(s) from an alternative supplier (if there is an appropriate alternative supplier) after a discussion with the current supplier.

4:13:1	Fast and slow movers identification
Necessary assumption	The TPS generated by the replenishment model will vary across different retail scenarios. It behooves the company to learn more about the factors that affect TPS.
Strategy	The Company has an mechanism for knowing how to effectively increase TPS through modifications to the inventories held on the shelves.
Parallel assumptions	➢ When the retailer collects daily consumption data, it is relatively easy to track the slow movers. ➢ To calculate TPS of each SKU, the retailer needs to determine the selling price minus the purchase price multiplied by the volume sold of an SKU, divided by the amount of shelf space taken up by the SKU overall in the shop. ➢ Planning experiments to measure the impact of factors (such as variety, locations and display area of SKUs) in different shops enables the retailer to identify and quantify the parameters impacting the differences in TPS levels.
Tactic	The Company puts in special efforts, from the outset, to measure the TPS generated in the various retail scenarios and to identify the parameters impacting the changes (type of products, retail location, display area, etc…).

4:13:2	Exchange mechanism
Necessary assumption	Knowing which products are better movers is not enough; the retailer must also have a mechanism for deciding which slow movers to replace with which better movers, in addition to knowing how and when to replace them.
Strategy	The Company has an effective exchange mechanism for replacing slow movers with better movers.
Parallel assumptions	➢ In some retail environments, certain products are staple products which also have lower margins (i.e. milk and bread). These products should not be replaced since they are needed to attract consumers to the store. ➢ Better movers of the same type of product become replacements for the slow movers. ➢ Trucks are sent often from the RDC to the shops to deliver goods; these trucks can be loaded at the shops with slow movers to send back to the RDCs.
Tactics	➢ The Company decides which slow movers to be removed from the shelves and decides which better movers to replace them with. ➢ The slow movers are sent back to the RDCs in the trucks sent by the RDCs to deliver goods. Note: Good suppliers suggest which better movers to take instead and make the exchange for the slow movers.

4:13:3	Slow mover sales
Necessary assumptions	➢ Conventional suppliers (manufacturers) typically will not take back from the retailers SKUs which did not sell. ➢ A bird in the hand is better than nothing at all (it is better to sell a slow mover for some money as long as doing so does not hurt the sale of better movers which have higher markups).
Strategy	The Company effectively sells all the slow movers that have accumulated in the RDCs.
Parallel assumptions	➢ The more consumers that come to buy, the more sales increase. ➢ A number of consumers are attracted to markdown sales. ➢ Having a major markdown sale of a large volume and number of SKUs will attract many consumers to the shops.
Tactics	➢ The Company ships all the slow movers that were returned to the RDCs back to the shops at the end of each season. ➢ The Company has special sale of a large variety and volume of slow movers at markdown prices at the shops.

5:11:1	Establishing a reference
Necessary assumptions	➢ It is not enough that the first substantial actions of the VV initiative will result in immediate substantial benefits. These benefits have to also be **acknowledged** as the outcome of the initiative. ➢ An initiative that increases sales, much more than it increases expenses, results in a substantial increase to the bottom line. ➢ The variability in sales is usually high. Therefore, an increase in sales (over a relatively short period – a few months) is not indisputable proof that the VV initiative is yielding substantial benefits.
Strategy	The Company realizes that the consumption-based mode of operation is a major cause of increasing profits.
Parallel assumptions	➢ When high variability exists, the way to prove the impact of an initiative is to have a control group in which the initiative is not implemented. ➢ The control group must be representative of all shops for the proof to be valid, but should also be as small as possible because the control group will not be improved for a while. ➢ Changes not just in sales but also in OE are compared to the corresponding changes in the control group to avoid the mistake of estimating the increase in net profit (NP) based on the company's current percentage of NP on sales (the actual impact on NP is determined by the change in T minus the change in OE).

Establishing the reference (Cont'd)

Tactics

- The smallest number of shops that are representative of the chain are selected to be the control group. These shops are excluded from the implementation in the beginning of the project.
- The changes in T and OE for the control group and the shops, in which the VV initiative is implemented, are tracked.
- Periodic, frequent reports on the results (including correct calculation of the impact on NP) are presented to (top) managers.

5:11:2	Shops' inventory
Necessary assumption	For a consumption-based mode of operation, the appropriate inventory targets must be set for each SKU. Currently, the inventory targets for each SKU held in the shops are either too high or have not been set.
Strategy	The inventory targets for each SKU in the shops are appropriate for the consumption-based mode of operation
Parallel assumptions	➢ The inventory target for each SKU is the amount needed for proper visual display (which is often set per product groups rather than per SKU) plus the amount needed to cover the optimistic demand within the transportation time from the RDC. ➢ The people who are most knowledgeable for determining proper visual display are the store and department managers, and some of the salespeople (education on the mechanism of consumption-based mode of operation is needed). ➢ To ensure proper salespeople attention and effective use of the shelf space, inventory above the target should be moved into the "backroom". When there is a lot of excess inventory it should be shipped back to the RDC. ➢ It takes time to set all the inventory targets. Results are achieved only when frequent replenishment to the shops starts. Therefore, to achieve fast results, inventory targets should be set first in shops serviced from the same RDC. When the shops are large, inventory targets should be done by product category (department) across all shops.

5:11:2	Shops' inventory (Cont'd)

Tactics

- Inventory targets are set in all shops outside the control group. The implementation is done region by region (for large shops, targets are set by department across all shops in a region).
- Proper visual display is determined by the head of the department or store manager, in conjunction with some of the salespeople. Prior to determining display, this team of people is educated about the replenishment system.
- The initial inventory target for each SKU is set to be equal to its average daily demand of the past month multiplied by its replenishment time (transportation time from the RDC) plus three sigma (the variability of the consumption during the replenishment time) plus whatever (if any) visual display was decided.*
- Changes in demand will be handled by the buffer management system.
- Inventory that is not part of the proper display is moved into the "backroom." If the total inventory in the shop (including the backroom) is more than double the amount required, the amount above the targets is shipped back to the RDC.

* When setting inventory targets, do not do a Ph.D. or be hysterical.

5:11:3	Replenishment from the RDCs
Necessary assumption	Replenishment from the RDCs to the shops is currently based on infrequent ordering of each SKU.
Strategy	The Company's RDCs are replenishing frequently based on actual daily consumption in the shops.
Parallel assumptions	➢ The time between orders, for the same SKU, the shops are currently placing is typically much longer than one day. ➢ A large portion of the SKUs are not picked daily in the RDC. ➢ With daily orders, each SKU will be picked more frequently. ➢ Due of the size of the warehouse, it takes time to pick a large variety of SKUs in the RDC. ➢ In order to prevent picking from becoming a bottleneck, actions should be taken, such as moving several day's worth of demand of each SKU near the dock for quick picking, and replenishing it from the main inventory and/or hiring more pickers if needed. ➢ Based on the quantities needed, the RDC frequently sends a (full) truck to the shops. ➢ The replenishment time to the RDC is the transportation time from the CDC or the replenishment time from suppliers if there is no CDC.

Replenishment from the RDCs (Cont'd)

Tactics

- The shops report daily sales to the RDC.
- The appropriate actions are taken to ensure that picking in the RDCs does not become a bottleneck.
- The RDC ships goods to the shops based on actual consumption (considering full truckloads per reasonable routes).
- The initial inventory target for each SKU in the RDC is set to be equal to the average daily demand in the past month, summed across all the shops it supplies, multiplied by its replenishment time (from the suppliers or CDC) plus three sigma (the variability of the consumption during the replenishment time).*
- Changes in demand will be handled by the buffer management system.

* When setting inventory targets, do not do a Ph.D. or be hysterical.

5:11:4	Replenishment through the CDC
Necessary assumption	A CDC is required to be able to fully take advantage of aggregation. Some retail chains do not currently have a CDC. If they do have a CDC, it is not currently being managed based on the consumption-driven mode of operation.
Strategy	The Company effectively uses CDC.
Parallel assumptions	➢ Inventory targets in the CDC are set based on demand during the replenishment time (the sum of the order, production and transportation lead times) from the supplier. ➢ It is typically time consuming to establish a CDC (rent, build or buy). ➢ When daily sales are reported to the CDC, the replenishment time from the CDC to the RDC is reduced to just the transportation time from the CDC to the RDC. As a result of the consumption-based mode of operation, the inventory levels in the RDCs will significantly decrease. ➢ Therefore, the space that is freed up in the RDCs can be used to create the CDC if there is not a CDC. ➢ For different SKUs different RDCs can serve as CDCs.

5:11:4	Replenishment through the CDC (Cont'd)

Tactics

- If the Company does not currently have a CDC, part of the RDCs become CDCs as well. In order to quickly get results, RDCs that will initially become a CDC will be the ones that are closest to many suppliers (later, better locations for the CDCs can be determined based on the impacts on inventory levels in the supply chain and transportation costs).
- The RDCs report daily sales to the CDCs.
- The CDCs ship products frequently to the RDCs based on actual consumption (considering full truckloads and reasonable routes).
- The initial inventory target for each SKU in the CDC is set to be equal to the average daily demand of its past month's demand across all the shops it supplies through the RDCs multiplied by its replenishment time from the supplier plus three sigma (the variability of the consumption during the replenishment time). If the total inventory in each RDC is more than double the amount required (sum of the inventory targets), the amount above the targets is shipped back to the CDC.*
- Changes in demand will be handled by the buffer management system.

* When setting the target, do not do a Ph.D. or be hysterical.

5:11:5	Frequent ordering from suppliers
Necessary assumption	Currently, the order lead time to buy from suppliers is relatively long. Increasing the frequency of orders proportionally reduces the inventory needed (doubling the frequency almost cuts the inventory in half).
Strategy	The Company reduces the order lead time for buying from its suppliers
Parallel assumptions	➢ Convincing suppliers to agree to daily orders is time-consuming. ➢ It is not necessary to get suppliers' agreement to order twice as frequently (e.g. if the SKU is currently ordered once a month, it will be ordered twice a month).
Tactic	For each SKU that is ordered repeatedly, the Company orders that SKU twice as frequently as it did before the VV initiative began.

5:12:1	Buffer management system
Necessary assumption	It is impractical to manually adjust the inventory targets of a very large number of SKUs. If the targets are not adjusted in accordance with changes in demand, sales will be lost or inventories will be too high.
Strategy	The Company has an automated mechanism for quickly and suitably adjusting inventory targets.
Parallel assumptions	➢ When replenishing to actual consumption, the inventory on the way plus the inventory on-hand (at the site) are equal to the inventory target (except for a period of time after a target decrease). ➢ There is variability in consumption (and other factors such as Murphy or replenishment time) over time. As long as the variability is within the noise, adjustments do not help, but rather cause damage (the fundamental concept of TQM). ➢ The inventory target (buffer) is divided into three equal zones, in which the red zone is the lowest inventory level, while the green zone is the highest level. ➢ If for too long* the on-hand inventory is in the red or green zone, adjustment to the inventory target is needed. ➢ Changing the inventory target by too little necessitates a long time until the system is adjusted to the new situation. Changing the inventory target too much causes the system to oscillate. Experience shows that changing the target by the size of one zone from the current size is effective. * “Too long” is determined by the desired service level. The default is the replenishment time. (Cont’d)

5:12:1	Buffer management system (Cont'd)
Parallel assumptions (Cont'd)	➢ The impact of an adjustment starts only when the adjustment was completed. There is no point in contemplating an additional adjustment before the previous adjustment starts to have an impact. ➢ When the inventory target was increased, the adjustment is completed only when the additional inventory has arrived on site. When the inventory target was decreased, the adjustment is completed only when the inventory on hand has decreased to be in the green zone.
Tactics	The Company implements buffer management - the automated system that adjusts the inventory targets (the buffers) at the shops, RDCs and CDC based on actual consumption: ➢ If the inventory on hand spends too much time in the red (default - one replenishment time), the inventory target is increased by the size of one zone (1/3rd) of the current buffer size. If it is too much in the green, the target is decreased by the size of one zone. ➢ When the target was increased, the corresponding shipment will include what was just sold plus the amount of the target increase. The system waits for the shipment that includes the target increase to arrive, before starting to monitor for additional adjustment. ➢ Once the inventory target has been decreased, the system waits until the on-hand inventory decreases to be again in the green zone before starting to monitor for additional adjustment.

5:12:2	Expediting
Necessary assumption	Many times there is a possibility to get the goods much faster but for a much higher price. It behooves the company to PRUDENTLY take advantage of that optional flexibility.
Strategy	The Company reacts quickly and effectively in handling the indication of a need for more inventory.
Parallel assumptions	➢ The method that is used to increase inventory targets is based on statistics and as such it might be that sometimes it increases the target not due to an assignable/special cause but due to a (bigger than usual) statistical fluctuation (common cause). ➢ Increasing unnecessarily the inventory target (even when it is corrected after a while) has its price. ➢ Whenever the higher cost, needed to get the goods much faster, is considerably less than the damage caused by losing a sale (when the expediting option is viable), it is also cheaper than taking the risk of losing sales when the on-hand inventory is in the red zone for too long. The difference between the on-hand inventory and the top of red zone should be expedited. ➢ It is also cheaper to expedite than to suffer the damage of increasing the inventory target unnecessarily. (Cont'd)

5:12:2	Expediting (Cont'd)
Parallel assumptions (Cont'd)	➢ If there is an assignable/special cause, even when the missing stock was expedited, the system will soon reach again the on-hand inventory being too long in the red zone. Raising the inventory level is much cheaper than to constantly expedite.
Tactics	When an expediting option is viable: ➢ When the system suggests the target should be increased, the system orders the missing inventory (the gap between the on-hand inventory and the top of the red zone) using the more expensive option rather than increasing the inventory target. To prevent an increase in the inventory target, future consumption equivalent to the amount expedited is not ordered. ➢ If after one replenishment time from when the expedited order is received, the target should be increased, the system increases the target using the conventional route and orders the missing inventory using the expedited option.

5:12:3	Adjusting for peak demand
Necessary assumption	➢ It is not rare to have cases when there are known changes in demand. The duration of some of the known peaks is less than two replenishment intervals (promotions, weekends, etc.) ➢ The reaction time of the buffer management system is limited to two replenishment intervals (one replenishment interval for monitoring and the other to react).
Strategy	The buffer management system is able to effectively cope with significant peaks in demand that are expected to occur.
Parallel assumptions	➢ The buffer management system will be able to react faster to known changes in demand if the relevant information is input into the system (the time and magnitude of the change). ➢ If the demand increase is less than 30% of the inventory target the improvement due to the additional information is negligible.
Tactic	The Company provides the buffer management system with known changes in demand.

5:13:1	Ordering daily from suppliers
Necessary assumption	The practice of ordering according to min-max (or according to reorder point and EOQ) is based on archaic reasons and is unnecessarily damaging to both the retailer and the supplier. Because: 1. Today's computer technology enables creating and monitoring orders with the fraction of the cost, time and hassle of manual methods. 2. The conventional methods cause order LT to be significant thus inflating the inventories the retailer needs to hold. 3. The conventional methods cause the retailer to batch demand, while the real considerations for batching are known just to the supplier – set-up time and filling up the trucks/containers. Improper batching creates artificial spikes in demand that decrease supplier effectiveness.
Strategy	The Company orders daily from its suppliers.
Parallel assumptions	➢ It is relatively easy to set up the computer systems to order according to daily actual consumption, and to pay based on deliveries per period (week or month). ➢ If the ramifications of order lead-time are not explained to purchasing, they will regard daily ordering as an extra hassle and are likely to find ways to deviate using artificial cost reasons. ➢ Experience shows that moving to daily orders should be done only after the details have been agreed upon with the supplier – shipping full trucks/containers, batching invoices, unit price based not on single order quantity but rather on quantity actually ordered per month, etc. ➢ Supplying the daily consumption data to the supplier reduces the order lead-time to just one day.

5:13:1	Ordering daily from suppliers (Cont'd)
Tactics	➢ The Company trains purchasing (and IT) in the cause-and-effect logic that underlies inventory management, and puts the needed practice and system in place. ➢ The Company agrees with its suppliers on the details of daily ordering. ➢ Per supplier the new replenishment time is entered into the system (inventory targets will be adjusted in accordance by the system).

5:13:2	Deals with conventional suppliers
Necessary assumptions	➢ Ordering daily significantly reduces the replenishment time; however, suppliers may still give higher priorities to other orders thus delaying supply to the retailer. ➢ In cases where suppliers produce to order, ordering daily can further reduce the replenishment time by providing the ability to reduce the production lead time (Because ordering frequently spreads the load. It also significantly reduces the volumes per order - it takes less time to produce; it is easier to find a slot in the schedule; the number of SKUs per order is reduced - when there is large order composed of many SKUs, the entire order is not shipped until all SKUs are produced). However, inertia is likely to cause suppliers to continue to operate in line with their current production lead time.
Strategy	Suppliers are motivated to ensure maximum availability at the Company's shops.
Parallel assumptions	➢ Giving bonuses that are large compared to the percentage of profit on sales of the supplier (yet small relative to the retailer's markup) for improving TDD are enough of an incentive for a supplier to improve its TDD. Dramatic improvements in supplier DDP result in very high benefits to the retailer (much higher than the bonus paid). (Cont'd)

5:13:2	Deals with conventional suppliers (Cont'd)
Parallel assumptions (Cont'd)	➢ When the orders are small (daily orders) the supplier can usually (without any special effort) reduce its production lead time by at least 1/3rd. Cutting the production lead time shrinks the supply lead-time to the retailer's warehouse.
Tactics	➢ The Company makes deals with suppliers to provide them with daily orders. The due date is set according to the transportation time plus 2/3rd of the current production time. ➢ The Company uses the supplier's past performance to calculate their TDD monthly performance and regards it as the baseline for bonuses. The Company measures the TDD performance of the supplier on a monthly basis; every month, the supplier can get a bonus for performing at 50%, 25%, and 2% of the baseline. ➢ The Company makes sure that the total size of the bonuses for improving TDD is high enough to motivate suppliers, yet is a low percentage of its markup. ➢ On a weekly basis, the Company issues a prioritized TDD report to the supplier indicating the orders which are endangering the supplier bonus – those most affecting the TDD. ➢ The inventory targets of the Company's CDC are adjusted (by the already implemented Buffer Management) to take advantage of resulting reduction in replenishment times (further reduced order lead-time and reduced production lead-time).

5:13:3	Deals with good suppliers
Necessary assumptions	➢ Good suppliers deliver in a fraction of the industry lead-time. They do not have any problem dealing with many relatively small orders (actually they prefer this more than one large order). They are extremely flexible and reliable. And, most importantly, they do understand how their behavior impacts the performance of the next link and are eager to go into win-win deals. ➢ It behooves a retailer to entice its suppliers to invest the efforts needed to become good suppliers (especially the ones that have long production lead times and/or supply a large variety of SKUs which are subject to highly variable demand).
Strategy	More and more of the Company's suppliers are good suppliers that have win-win relationships with the Company.
Parallel assumptions	➢ Approaching a good supplier with the daily orders offer is like bursting through an open door. ➢ The ability of the good suppliers to understand how their behavior impacts the performance of the retailer enables reaching an agreement on bonuses based on the actual improvement in inventory turns and/or TPS of the retailer. Relative to the relations with a conventional supplier, both the retailer and the good supplier enjoy much higher benefits.
Tactic	For good suppliers, the Company offers bonuses based on increasing the Company's inventory turns and/or TPS.

5:21:1	Criteria for Conversion Priority
Necessary assumption	Considering the number of conventional suppliers and the fact that as sales increase, the need to eliminate deterioration increases, effective criteria for prioritizing suppliers to convert into good supplier are required.
Strategy	The Company has effective criteria for prioritizing the conversion of suppliers into good suppliers.
Parallel assumptions	➢ The EST of the supplier has a significant impact on the inventory turns of the CDC of the retailer. When using the consumption-based mode of operation, the CDCs hold the majority of the inventory in the supply chain. The higher the EST, the lower the turns in the CDC. ➢ Improving the EST of suppliers that represent larger portions of the retailer's total sales will have a significant impact on the inventory turns of the retailer. ➢ Therefore, the criteria for converting suppliers, in order of importance, should be: 1. The portion of the retailer's sales that the supplier represents. 2. The EST of the supplier.
Tactics	➢ The suppliers are sequenced based on these two criteria, in order of importance: 1. The portion of the retailer's sales that the supplier represents. 2. The EST of the supplier. ➢ If the EST of the supplier increases significantly, the priority list is adjusted accordingly.

5:22:2	Process for encouraging conversion
Necessary assumption	An effective process for convincing suppliers must be based on win-win and incentives to change.
Strategy	The Company has a effective process for convincing suppliers.
Parallel assumptions	➢ The bonus structure of the retailer has financial incentives to motivate suppliers to become good suppliers. ➢ A referral from a partner is a relatively effective form of starting the buy-in process for a implementing a change (which does not involve pressure). ➢ Goldratt Group has effective processes for getting buy-in of conventional suppliers to become good suppliers and has an effective implementation process. The suppliers would be presented in the buy-in process with options for becoming good suppliers: ➢ Implementing a VV with Goldratt Consulting using the S&T Tree for becoming good suppliers. ➢ Implementing all or some of this tree on their own through the use of “The Goal” book and video and webcast on implementing part of the tree. If desired, they can get some training from Goldratt Schools to help them implement DBR and BM.
Tactic	The Company explains its bonus structure for good suppliers and provides its suppliers with a referral to Goldratt Group.

5:**:*	***
Necessary assumption	***
Strategy	***
Parallel assumptions	➢ *** ➢ ***
Tactics	➢ *** ➢ ***