

NDAREC would like to thank CoBank for their generous support of this study.



*Food Distribution Pilot Project in Northeastern North Dakota  
Final Report  
October 3, 2019*

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This pilot project represented an effort to use data to illustrate why collaboration in the purchase and distribution of wholesale food products to rural places is necessary and to use the data to encourage rural grocers to change the way they operate. We began the work in a five-county area in northeastern North Dakota and one reservation. Our target audience was all businesses and organizations that purchase wholesale foods products.

From previous research, we had learned the current distribution infrastructure was adding to the cost of food in rural places and contributing to our lack of variety of products. Grocery stores within North Dakota are served by a tiered distribution system where pricing is based on purchased volumes. The largest and most affordable distributors require products be purchased in whole cases in quantities too large to sell in a timely manner. There are six major distributors delivering wholesale food products to businesses and organizations within the pilot project area. The Upper Great Plains Transportation Institute conducted a basic optimization of the distributor routes (based on efficiency rather than volume) and found that there was a projected annual transportation savings that could be gained amounting to \$383,000. Based on the projected distribution savings amount, the question of whether the state could benefit from a different distribution model emerged.

**North Dakota Pilot Project area:** Communities with a population of 2,100 or less in the counties of Cavalier, Nelson, Pembina, Ramsey and Walsh and Spirit Lake Reservation. Excluded towns in the area due to population size: Grafton, (4,159 people) and Devils Lake (7,278 people).

**Businesses included:** Data was collected from grocery stores, schools, restaurants, hospitals, convenience stores and nursing homes.

**Understanding our size and geography**

As a starting point for this project, we wanted to understand how rural grocers in the study region compared to those in other states and if it could really be a one-size-fits-all solution across the nation. An initial review of research available on the Internet revealed that a host of rural states were addressing the loss of their rural grocery stores and a variety of solutions were emerging. Low interest financing, management tools, conversions to nonprofits, and energy efficiency upgrades were common across the board with a quiet recognition that distribution is a huge

problem. It's a complicated system, intertwined with policy, that is difficult to address without the help of governmental assistance.

A state like North Dakota will display the symptoms of a failing system earlier than others due to our small population base. Sixty-seven percent (67%) of our land mass has less than six (6) people per square mile. This is considered "frontier" or "remote" by the healthcare industry and is recognized by them as areas that require "special efforts to provide rural healthcare services." Additionally, 82% of our towns have less than 1,000 people. Retail operators in towns of this size quickly feel the negative consequences of market consolidations and outside competition. Also, the distances traveled between locations adds another layer of cost to our products.

The 2019 Fifth Biennial Report on Health Issues for the State of North Dakota stated that 50% of North Dakota's population is considered to reside in urban or metropolitan areas (populations greater than 10,000 individuals) and that 26% resides in rural areas. These percentages show a significant shift in population to urban areas over the past several decades where previously more than half of the state's population resided in rural areas. North Dakota ranks 49<sup>th</sup> out of all states in population density, and importantly, is tied for fourth place of all states in the percentage of its population that is 85 years and older. The shift of population from rural to urban areas in North Dakota, in combination with an aging rural population, places the burden of reduced sales for rural grocery stores in the pilot area.

### **Data Collected**

(See attached survey template)

A contact list consisting of grocery stores, restaurants, nursing homes, convenience stores, schools and hospitals was created for the pilot project area. Our staff enlisted local development professionals to conduct surveys in person. The data collected focused on volume (dry goods, refrigerated and frozen), frequency of delivery, identification of distributors, challenges and willingness to collaborate. Businesses in towns with a population of 2,100 or less were included in the survey (this excluded Grafton and Devils Lake). In North Dakota, towns above 2,100 self-identify as a larger community.

1. The total wholesale volume of all businesses that purchase wholesale food products in the pilot project areas was \$172,900 weekly (it is estimated we missed about 25% of the businesses and we have not adjusted for those missed). The average U.S. grocery store has an average weekly wholesale volume of ~\$120,000.
2. Up to four major distributors stop for deliveries in each community. While it might be considered an asset to have access to a variety of distributors, there is a negative side to this consideration. Product is up-charged in various ways for delivering low product volumes and distances traveled by each distributor.
3. The total primary distributor volume for all businesses in the pilot project area was extremely low - \$45,475 with 35 stops.
4. There are about 50 direct store distributors (DSD) that service this area, carrying products including milk, frozen pizza, soda and chips. Rural stores are paying a premium for small

volumes. Surveys revealed that some DSDs are ceasing their service to some remote, low volume rural stores. This cessation further decreases the variety of products offered in small stores.

5. Volume breakdown – approximately 80% dry products and 20% combined refrigerated and frozen delivered products. This information was needed to understand the infrastructure needed to hub and transport food.
6. Overall, roughly 77% of those surveyed indicated they understood why collaboration was needed.

The data showed that the volume of the entire 5 county area and Spirit Lake was similar to that of 1.5 average grocery stores in the U.S. Rather than the pilot area receiving 1-2 routes per week by one distributor, this volume is split among six major distributors and requires six or more routes per week with much lower product volumes for each weekly route.

### **The Distributors**

We engaged in conversations with three distributors to test our theories and to test their willingness to engage in new concepts. We also collected information on other ways food is distributed in North Dakota.

**Major distributor:** They recognized the difficulties of continued delivery to smaller stores and confirmed it was not cost effective for them to deliver in smaller volumes and less than full cases per product. They remained committed to their business model of delivering whole cases to stores that can meet certain volume requirements. They were open to discussions of how to fulfill a collective order from several stores delivered to a hub in whole cases to be sorted by the hub. Logistics would need to be addressed by the stores or hub operators. A host of issues emerge when considering collaborative purchasing, for example, will the stores continue to receive management and marketing tools from the distributor, such as assistance with shelf tags, marketing and pricing product; who would cover the cost of spoiled/damaged products; who would be responsible for collating individual store orders; and how would last-mile delivery take place.

**Mid-tier distributor:** This distributor is willing to break cases to accommodate smaller orders/stores to the point where a store can order a single item. The lower the volume the higher the cost per item. The company is interested in expanding further in North Dakota, in a more concentrated manner, into rural areas. The company is building its business model around this strategy. They are in need of places to park their trucks and trailers for driver rest periods due to the length of routes from their warehouse. They stated they had tried operating redistribution hubs but it did not prove economically feasible for them.

**Small distributor:** This level distributor lacked the capital to improve its system to better serve rural stores. They are unable to offer online ordering to its customers and therefore

struggle with having items available at the time needed for resupply. Many of their stops are for very small sales amounts. They supply the products customers are unable to secure through primary or direct store delivery distributors.

***Direct Store Distributors (DSD):*** We did not visit directly with DSDs. During the pilot project period, one major DSD began dropping low volume customers in the state because the delivery did not cover their margins. Rural stores can purchase that DSD's products online at a much higher cost. We suspect this will continue to happen. At the same time, on a national level, a lawsuit is coming together against a major distributor for predatory pricing in rural areas. There are more than 50 DSDs in North Dakota, all which carry a single product or specific product line, such as milk, bread, frozen pizza or soda. With each truck comes an additional transportation charge for the small retailer. Through previous efforts, we have learned that DSDs prefer to control and restock their inventory rather than hub it.

***Milk distribution:*** The North Dakota Milk Board assures milk delivery to every community/business across North Dakota, however, often the price is so high the store is left searching for other milk supply options. Sometimes, this involves driving to other towns to purchase their supply at a retail price because it is more affordable in other towns.

We had an opportunity to sit in on an open ND Milk Board meeting that addressed rural distribution. The room was filled with food service, milk, small and major distributors. The issue at hand was the right for all distributors to deliver milk under the current law. The objective is access to milk delivery in all communities. The concern is that some businesses/communities would lose their milk supply without a mandate because their orders are so small.

***Local foods:*** Local foods producers lack effective transportation systems and those producers could benefit by partnering in a redistribution hub with conventional foods to distribute their product. Pricing at the wholesale level may be a concern.

North Dakota has three large wholesale food distribution warehouses, one in Bismarck and two in Fargo. Several areas in North Dakota are more than a day's truck delivery distance to reach stores. Distributors must comply with regulations regulating driver time before a rest is required. (see attached diagram). The large distribution warehouse in Minot (north central North Dakota) recently closed.

### **Transportation Opportunities**

As this work progressed, we developed the tagline "Purchase like Dollar General and distribute like Amazon" to help people more easily understand what we were trying to demonstrate. In other words, Dollar General purchases for all their stores collectively allowing them to achieve a large purchase volume and deliver a lower cost to rural places. Amazon has partnered with

existing distribution companies, those that are already driving the same roads, to keep their costs down. Should we be able to be successful in having products delivered to a redistribution hub, and consequently, who are the logical partners to drive the last leg of distribution?

***Small, niche distributor:*** There are small companies that currently distribute products that are difficult to secure from a primary distributor. These companies may benefit by coupling their deliveries with routes from a redistribution hub to rural grocers who are members of a collaborative group.

***North Dakota Department of Health*** operates the division of emergency preparedness. They currently conduct drills to keep their equipment in good operating condition. The equipment consists of a sophisticated online purchasing system, a climate-controlled warehouse and semis, trucks and climate-controlled trailers. With their concern for the health of the people in the state, the Department of Health and a collaborating group of rural grocers both may benefit by partnering in the operation of this system.

***United States Postal Service*** delivers mail to all locations in North Dakota daily and is concerned about its continued viability in low volume areas.

***Delivery services:*** Several companies operate delivery services, such as delivering auto parts or farm equipment parts to area dealers, and others who run supplies between towns and cities.

***Cities:*** Cities that are concerned about keeping their rural grocery store open may consider using underutilized facilities to develop and operate a rural grocery hub.

### **Continued Decline**

The attached excel spreadsheet displays our tracking of full-service rural grocery stores over the past 6 years. We began this work by tracking stores in communities with a population of 2,500 or less and we identified 137 stores in operation. After the first survey, in 2014, the baseline was decreased to a community population of 2,100 or less. Retailers living in communities larger than that did not identify themselves as small. With this adjustment, 9 grocery stores were removed from the original list.

Today (October 3, 2019) there are 98 remaining full-service grocery stores in North Dakota in communities with less than 2,100 people. They are broken out in the baseline list of 128 stores as follows:

- 57 independent grocery operators
- 25 multi-store ownerships
- 30 closed or no longer full service
- 16 nonprofits (community owned, cooperative or 501c3)

## **The Competition**

The primary assumption is that small stores are struggling because of the fact that rural population in North Dakota is declining and also that people are choosing to shop out of their hometown. However, the survey data indicates people are shopping for price, variety and convenience. Demographics indicate rural people typically have lower incomes than urban people, suggesting price may matter more to them than to their urban counterparts.

Other factors at play are retail consolidation and market dilution. Retailers continue to consolidate, aiming for larger volumes and lower wholesale prices. Individually, small rural grocery stores cannot compete with larger grocery retailers.

## **Obstacles to Implementing a Large-scale Purchasing Cooperative/redistribution Hub**

**Competition:** Rural grocers view each other as competitors, even at distances of up to 45 miles from each other. There is a lack of understanding that North Dakota citizens need healthy communities and appealing delivery routes to continue to attract distributors to an area. Transportation costs and therefore food will cost more the further distributors are required to drive between stops on their routes.

**Transportation infrastructure:** The food industry deals with a high volume of perishable foods. To dovetail with exiting transportation companies, such as the United States Postal Service, an investment in climate-controlled devices, such as climate-controlled trailers or igloos, will need to be made in order to assure high quality and safe perishable food deliveries.

**Lack of Capital:** The rural grocery sector does not have the financial or human capital resources needed to invest in new ways that products are purchased and delivered.

**Online system:** Grocers do not have the resources to provide the capacity to implement online shopping. They are lacking software, capital and people needed to implement online shopping.

**Fear of Change:** It is a major, time-consuming process to change distributors with no guarantees that the end result of the change will be better. Grocers tend to have a good working relationship with their distributor. Some stores only have one distributor option remaining and worry they may lose their distributor if they work on a project that advocates switching distributors.

## **Results**

### **1. Legislative study**

(See attached testimony and copy of the bill)

The data collected through this project was used to introduce a study resolution to the North Dakota state legislature to determine what role the state should play in the distribution and transportation of food to rural places. The bill passed and was selected

for study during the 2019-2021 interim. This data has been crucial for demonstrating not only the decline in the rural grocery sector, but the decline of the state's rural condition overall. It has helped move some policymakers from the common belief that people prefer to drive to shop for their food to an understanding that rural places cannot compete under the current tiered purchasing system.

## 2. *Wider public awareness of the issue*

Data that documented the decline of our rural grocery sector as well as the factors that were leading to the decline attracted media attention and public reaction. Lawmakers have expressed surprise at the number of phone calls they have received from their constituents.

- a. “Lawmakers want to study rural grocery issues,”  
<https://www.kxnet.com/news/bismarck-news/lawmakers-want-to-study-rural-grocery-issues/1850243073>
- b. “Senate Ag committee unanimously passes study on food insecurity to Senate floor”  
<https://www.kfyrtv.com/content/news/Senate-Ag-committee-unanimously-passes-study-on-food-insecurity-to-Senate-floor-505845201.html>
- c. Articles have also been carried by the Bismarck Tribune, “Small North Dakota towns struggle amid food deserts,”  
[https://bismarcktribune.com/news/local/small-north-dakota-towns-struggle-amid-food-deserts/article\\_8699145c-d74e-5cc8-9a3a-cebff0a0846e.html](https://bismarcktribune.com/news/local/small-north-dakota-towns-struggle-amid-food-deserts/article_8699145c-d74e-5cc8-9a3a-cebff0a0846e.html)
- d. Minot Daily News, “Even in an ag state rural citizens struggle for access to fresh food,”  
<http://www.minotdailynews.com/news/local-news/2019/03/even-in-an-ag-state-rural-citizens-struggle-for-access-to-fresh-food/>  
<https://apnews.com/41bb73db51d042b1b514be80fbab3df1> (this article was picked up by the Associated Press and published nationally.)
- e. and the Wahpeton Daily News, “Struggle for fresh food in grocery desert.”  
[https://www.wahpetondailynews.com/news\\_monitor/struggle-for-fresh-food-in-grocery-desert/article\\_f37f4ef4-4fcd-11e9-b10e-f7afafbf69d8.html](https://www.wahpetondailynews.com/news_monitor/struggle-for-fresh-food-in-grocery-desert/article_f37f4ef4-4fcd-11e9-b10e-f7afafbf69d8.html)
- f. NDxPlains: <https://ndxplains.com/> and KFGO [Afternoons Live with Tyler Axness](#):
- g. *Are Small Town Grocery Stores Savable?*  
<https://kfgo.com/podcasts/afternoons-live-with-tyler/12687/are-small-town-grocery-stores-savable/>
- h. *Interim study to look at rural grocery stores, food distribution in North Dakota*



Forum Communications and AgWeek:

<https://www.grandforksherald.com/news/government-and-politics/2711015-Interim-study-to-look-at-rural-grocery-stores-food-distribution-in-North-Dakota>  
<https://www.agweek.com/business/agriculture/4625647-interim-study-look-rural-grocery-stores-food-distribution>

- i. *The Forgotten Ones* in the Fargo area publication, “High Plains Reader”:  
<https://hpr1.com/index.php/feature/news/the-forgotten-ones/>
- j. Prairie Public News: <https://news.prairiepublic.org/post/hunger-free-nd-rural-grocery-access>
- k. KFGO News and Views with Joel Heitkamp: <https://kfgo.com/podcasts/news-views-with-joel-heitkamp/117905/lori-capouch-on-the-importance-of-rural-grocery-stores-they-are-pillars-to-our-small-towns/>
- l. PEW Charitable Trust Stateline: <https://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2019/10/02/as-rural-groceries-fade-away-lawmakers-wonder-whether-to-act>

### 3. *Distribution model analysis*

Three stores within the pilot project area agreed to enter the planning process together to analyze the redistribution model:

- Hub Store (pop. 1,373)
- Small Store 1 (pop. 233)
- Small Store 2 (pop. 189)

Additionally, a community without a grocery store was included for discussion purposes:

- Small City, ND (pop. 204)

The largest store, Hub Store, offered to be considered a redistribution hub. Small Stores 1 and 2 were considered delivery points of groceries from the Hub Store. Monthly sales volumes to the two delivery points were analyzed along with a cost comparison between a large grocery distributor and a regional convenience store distributor (C-Store distributor). Small rural stores do not have the sales volume to attract lower pricing for groceries from large grocery distributors and, therefore, must accept higher pricing from C-store distributors, who have lower minimum purchase requirements. The analysis looked at the potential of a small-scale distribution system for rural grocery stores.

The report was presented in a PowerPoint format with notes so we can easily share information with those interested. A copy of the report is attached.

In redistribution cost projections, the consultant was generous with cost estimates and conservative on projecting savings. Despite that, the analysis projected an estimated weekly savings of \$200 per store/\$10,400 annually. Given that the average annual net profit margin for a rural grocery store in North Dakota is approximately \$10,800, this is a substantial savings per store. This does not consider other factors, such as improved variety or increased sales a store may experience with lower prices.

A freestanding grocery locker system was included to demonstrate how a small town without a grocery store could gain access to food in their community, while at the same time improving the volume and price at a nearby small-town grocery-hub store. Under this model, the redistribution hub site would purchase a climate-controlled locker system, online purchasing software and a climate-controlled delivery vehicle. The lockers would be able to store dry, refrigerated and frozen foods.

Residents of Small City, ND would have the locker system located in their community and would be able to place orders online, through the Hub Store, and pay by credit card. The Hub Store would receive the orders and deliver them to the locker system in Small City, ND. Once delivered, the Small City customer would receive an email or text notice that the groceries are available for pickup along with a code to open the locker doors. Once the items are picked up, the Hub Store would receive a notice that the transaction is complete.

We continue to plan with the three grocery stores in the pilot study area; however, progress is slow in light of the state distribution study timeline and the pending potential for assistance through the state. The Small City location has opted to work with an emerging restaurant to provide a small area for the retail sale of groceries rather than a grocery locker.

We are presenting this as a final report with an obligation to report progress to CoBank should this work result in changing the way food is purchased and delivered in rural areas in any manner.

We sincerely thank you for your support of this work. Because of your funding, North Dakota was the first state in the nation to be able to document the declining trend and relating factors to rural grocery store closures. The data brings strength and credibility to the growing concern about rural food access and is attracting national media attention. Without this information we would not have been able to engage the state legislature in the issue. While we don't expect there will be a solution emerging from the state at this time, they are now aware of the problem and can be a part of the solution.



**Business:**

**Date**

**Email address:**

**Hours of operation**

**# of employees (#FT/#PT)**

**Primary Supplier**

**Primary Supplier Volume (weekly) in dollars**

**Delivery frequency**

**Weekly Sales (in dollars)**

**Breakout estimated weekly sales that are perishable (in dollars)**

**Direct Suppliers (include frequency)**

**Total Store Volume**

**% Conventional Foods  
% Food Service  
% Institutional  
% Other**

**Do you retail any local foods/list types**

What items do you have trouble securing?

## Challenges

Do you feel you lose business due to pricing?

Does your supplier assist you with pricing?

Are you satisfied with the quality/variety/pricing of your produce?

Are there certain products that you need to secure from big box stores due to pricing or lack of access? (explain)

Do you make home deliveries?

If there were an online ordering system and delivery mechanism available, would you be interested in providing this service?

Do you have any current collaborations for purchasing/marketing/other?

Are there any entities in your region that you would like to collaborate with?

What do you feel is working well in your store/in the rural grocery industry?

As rural populations decline, it becomes more expensive to distribute lower volumes of food over the same number of miles to these areas. Do you feel there are opportunities to improve the way we work together to achieve more affordability and better variety?

Do you do any marketing on Facebook?

What other types of marketing do you do?

What would it take for you to consider participating in a collaboration? (i.e. less time, more variety, better quality, lower wholesale cost, better servicing...)

Would you be willing to consider a collaborative arrangement even if your current supplier wasn't selected? (Assumption is that it would be lower

wholesale prices, better variety and not more work)

Are there any federal or state regulations that govern how you purchase that would affect how you could collaborate?

Do you currently receive any incentives or discounts that you feel would be jeopardized with a change in the way you purchase? (i.e. volume discounts - assuming collaborative purchasing)

Do you have excess capacity in warehouse space, trucking, other?

How long does it take to unload the primary supplier truck at your store?

Do you happen to know how many other stops your supplier makes on the same day (where - if known)

One of the components of this pilot project is to determine whether the cash flow from the small grocery stores generates an adequate income for the operators and enough margins to adequately maintain the building/business. To help us document this in an aggregate manner would you be willing to share:

Avg net operating margin (percentage):

Do you feel you earn a comfortable salary?

Are you comfortable with your debt to equity ratio?

Do you have building needs you are unable to address?

Is your equipment up-to-date/energy efficient?

Are you considering closing or selling your business within the next 5 years?

Do you feel your business generates enough revenue to attract a buyer in the future?

What type of accounting system do you use?

Anything else you would like to share?



# NORTH DAKOTA RURAL GROCERY INITIATIVE

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Walsh County, ND Distribution Model Analysis

# Grocery Glory Days



*Image credit: [Vintage illustration, via Retroarama](#)*

# Consumer Delivery Expectations

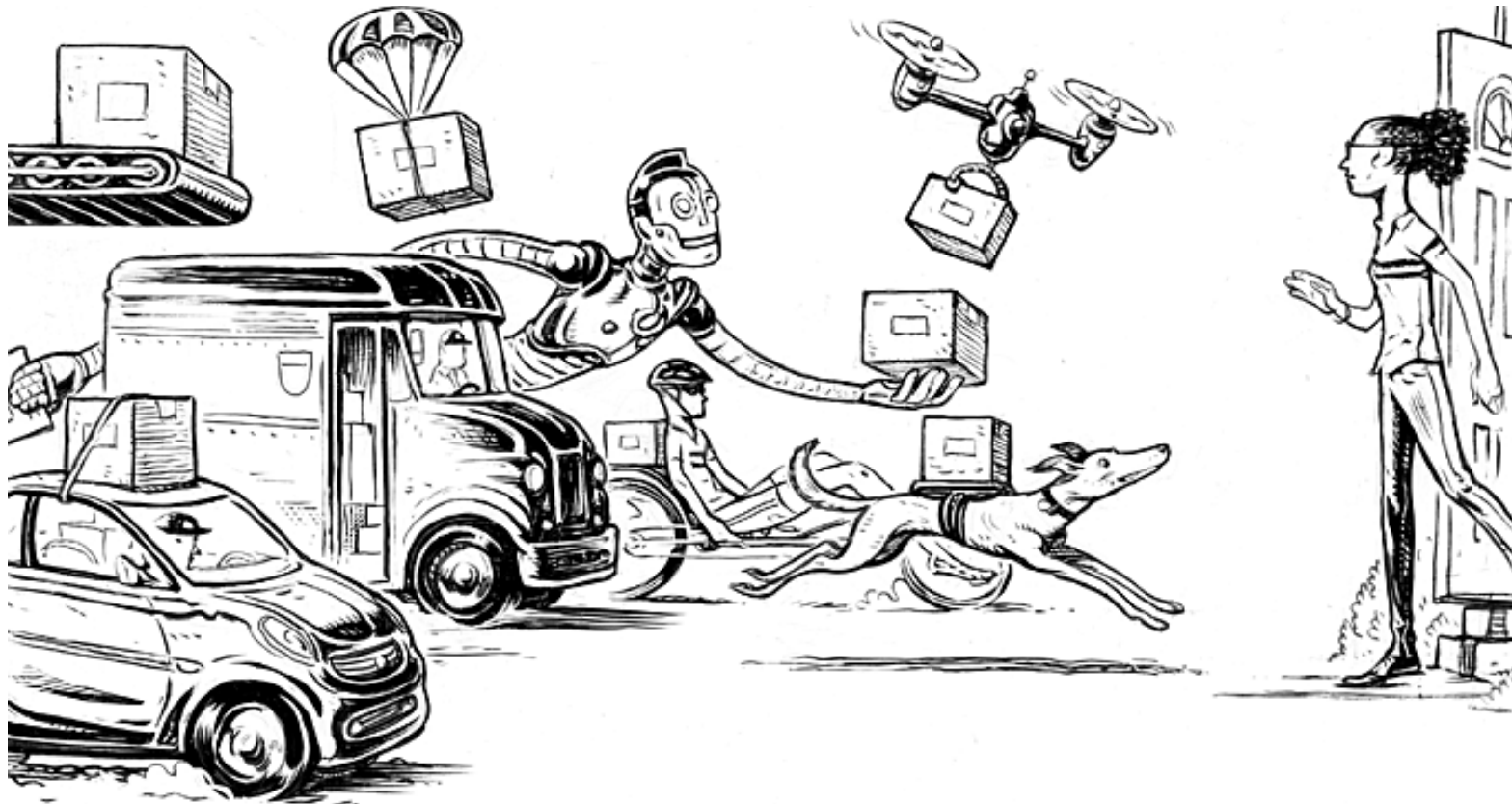
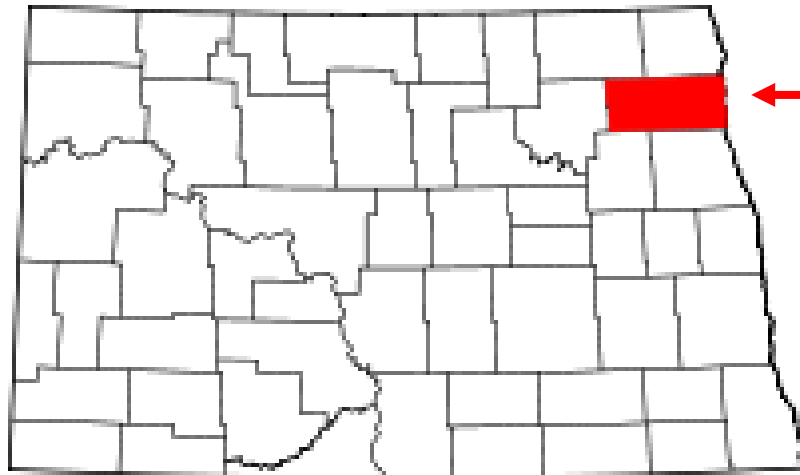


Illustration by Lars Leetaru

Now it's Convenience, Speed, and Quality

# North Dakota Rural Grocer Survey Objectives

1. Identify ways to improve rural grocer access to current and future food distribution resources
2. Identify if there are pockets across the state where all favorable conditions converge to show an optimal location to conduct a pilot study
3. Collect and input data into a software mapping system to show current distribution routes and make future predictions



Selected Walsh County, ND to Test  
an Alternate Food Distribution Model

# Independent Rural ND Grocer Facts

- Independent Rural Grocers Often Do Not Achieve Minimum Purchase Volumes
- Independent, Small Rural Grocers Pay a Premium for Goods (14% Based on Data)
- Independent Rural Grocers Require Improved Net Margins
- Improved Net Margins are Available with Increased Purchase Volumes
- Collaborative Purchasing Among Grocers Can Increase Purchase Volumes

col·lab·o·ra·tion

*noun*

Two or more people working together  
towards shared goals

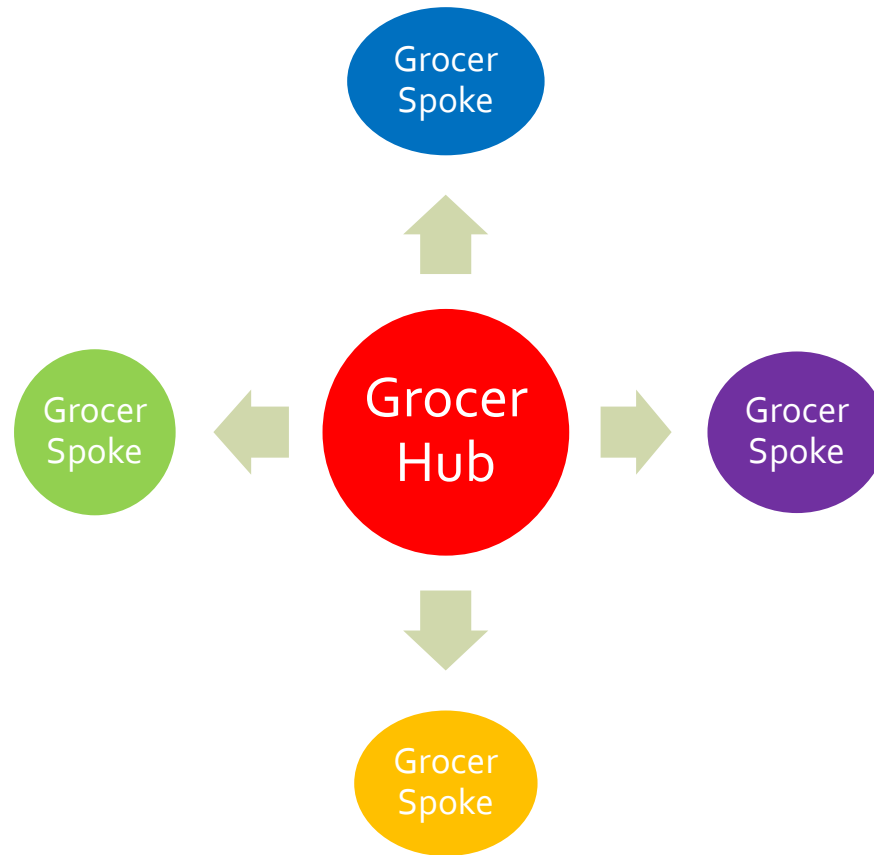
# Walsh County ND Rural Grocery Distribution Models

- Discussions Held With:
  - 4 stores
- Larger store– Currently Using Large Grocery Distribution Company
- Two small stores– Currently Using C Store Distributor Company

# Walsh County Grocery Distribution Model #1

- Grocery Hub – Weekly Deliveries from grocery distributor
- Two Small Stores to be serviced by the Hub Store using grocery distributor
- Two Small Stores, together, had purchased \$7,500 on average per week from C Store Distributor
- Grocery Distributor pricing vs. C Store Distributor could lower Two Small Stores grocery costs by 14% per week
- Grocery distributor weekly deliveries to Hub Store can increase by \$6,450 on average
- Weekly average purchase savings by Two Small Stores = \$1,050

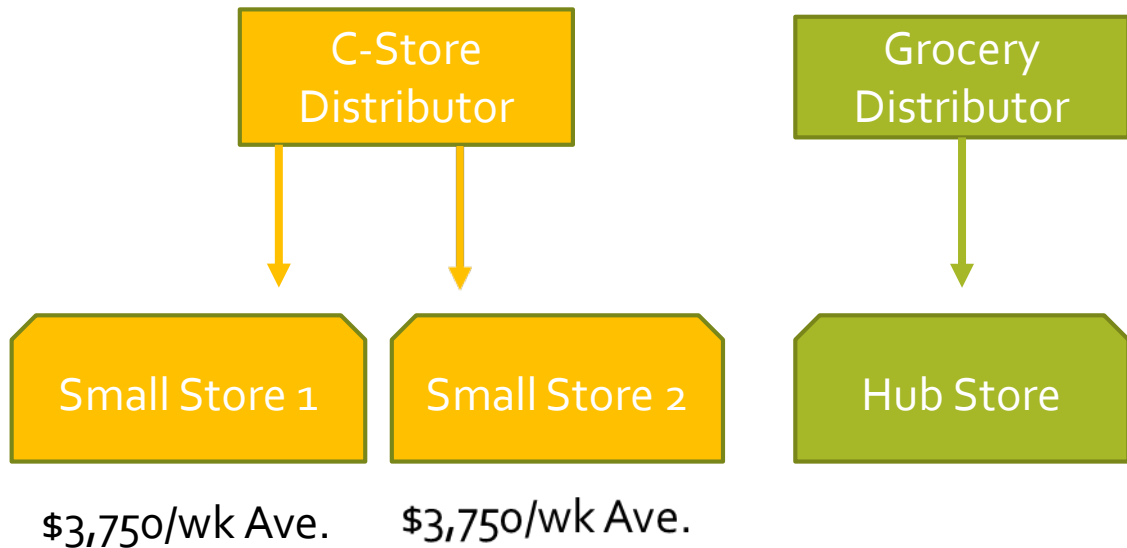
# North Dakota Rural Grocery Initiative Hub and Spoke Distribution Model



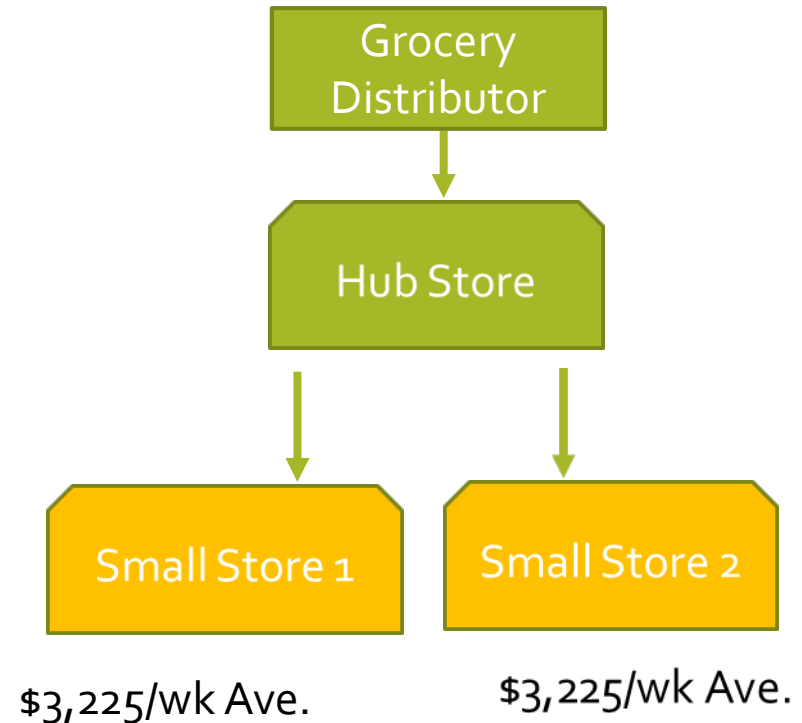


# Walsh County Grocery Distribution Model #1

## Current Distribution

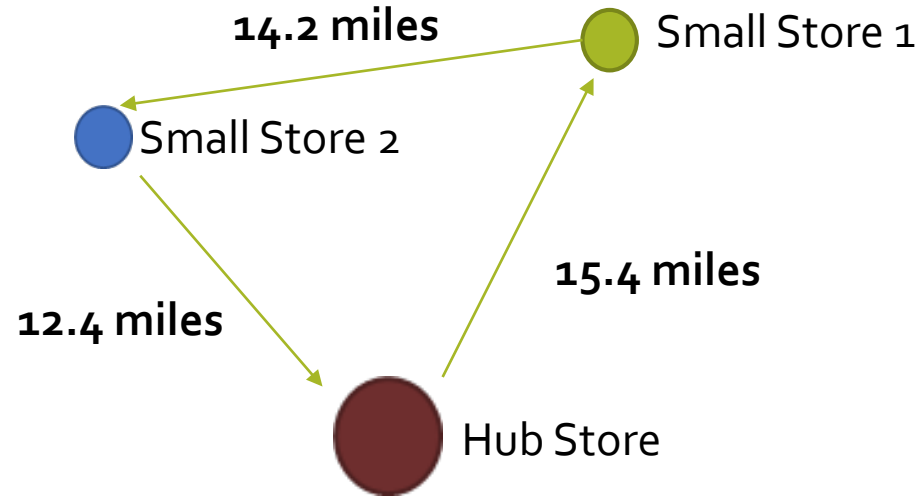


## Proposed Distribution



Grocery Purchase Cost Reduction = \$525/store/week

# Walsh County Grocery Distribution Model #1



**Route = 45 Miles**

# Hub Store Weekly Distribution Costs



Mileage = \$90/week  
\$2.00/mile



Labor = \$240/week  
\$20.00/hour



Admin/Warehouse = \$80/week



Overhead = \$50/week



Weekly Distribution  
Costs to 2 Stores =  
\$460

# Walsh County Hub and Spoke Savings per Week



**\$1,050** Cost Reduction/week for 2 Stores



**\$460** Hub Distribution Costs/week for 2 Stores



**\$590** Savings/week to be shared by formula to be developed among:  
Hub Store  
Small Store 1  
Small Store 2

# Expanded Distribution Analysis

## *Savings Shared Equally by Hub Store and Participating Grocers*

Assumptions													
Store Sales Average - \$3,750 per year													
Mileage Costs - \$2.00 per mile													
Labor Costs - \$20.00 per hour per employee													
Administration/Warehousing Costs - \$20.00/hour													
Overhead Costs - \$25.00/hour													
	Mileage		Labor Hours		Admin/Whse		Overhead		Total	Store Cost	Hub Spoke	Per Store	Mileage Cost
Stores	Mileage	Cost	Labor Hours	Cost	Admin/Whse	Cost	Overhead	Cost	Cost	Reduction	Savings	Savings	Per Store/wk
2	45	\$90.00	12	\$240.00	4	\$80.00	2	\$50.00	\$460.00	\$1,050.00	\$590.00	\$196.67	\$30.00
3	90	\$180.00	15	\$300.00	5	\$100.00	2.5	\$62.50	\$642.50	\$1,575.00	\$932.50	\$233.13	\$45.00
4	135	\$270.00	18	\$360.00	6	\$120.00	3	\$75.00	\$825.00	\$2,100.00	\$1,275.00	\$255.00	\$54.00
5	180	\$360.00	21	\$420.00	7	\$140.00	3.5	\$87.50	\$1,007.50	\$2,625.00	\$1,617.50	\$269.58	\$60.00
6	230	\$460.00	24	\$480.00	8	\$160.00	4	\$100.00	\$1,200.00	\$3,150.00	\$1,950.00	\$278.57	\$65.71

# Expanded Distribution Analysis

*Savings Shared Equally by Hub Store and Participating Grocers*



# Walsh County Distribution Analysis #1 Summary

1. Purchasing from a Large Grocery Distributor Can Deliver Lower Grocery Costs Compared to Purchasing from C-Store Distributors.
2. A 14% Reduction of Weekly Grocery Costs is Significant
3. Redistribution Costs from the Hub Store Would Absorb Approximately  $\frac{1}{2}$  of the 14% Purchase Savings.
4. The Hub Store Would Invoice Distribution Costs to the Two Smaller Stores to Cover Distribution Costs.
5. The Two Smaller Stores Would be Invoiced for Groceries at the Reduced
6. Nearly \$200 In Grocery Purchase Savings per Week Could be had for the Two Smaller Stores.
7. The Hub Store Could Obtain an Income Increase of \$200 per Week for the Hub. (Assuming all savings amounts after subtracting distribution costs are split 3 ways.)

# Walsh County Grocery Distribution Model #2

Hub Store Delivering Groceries to T4 Solutions Locker in Small City, ND



Increase store volume and market area without adding additional locations - ***at a fraction of the cost.*** Our Lockers are Frozen, Refrigerated and Ambient to insure the freshest delivery and food safety.

A 7-Unit Locker Cost = \$65,000 includes Delivery and Installation



# Walsh County Grocery Distribution Model #2

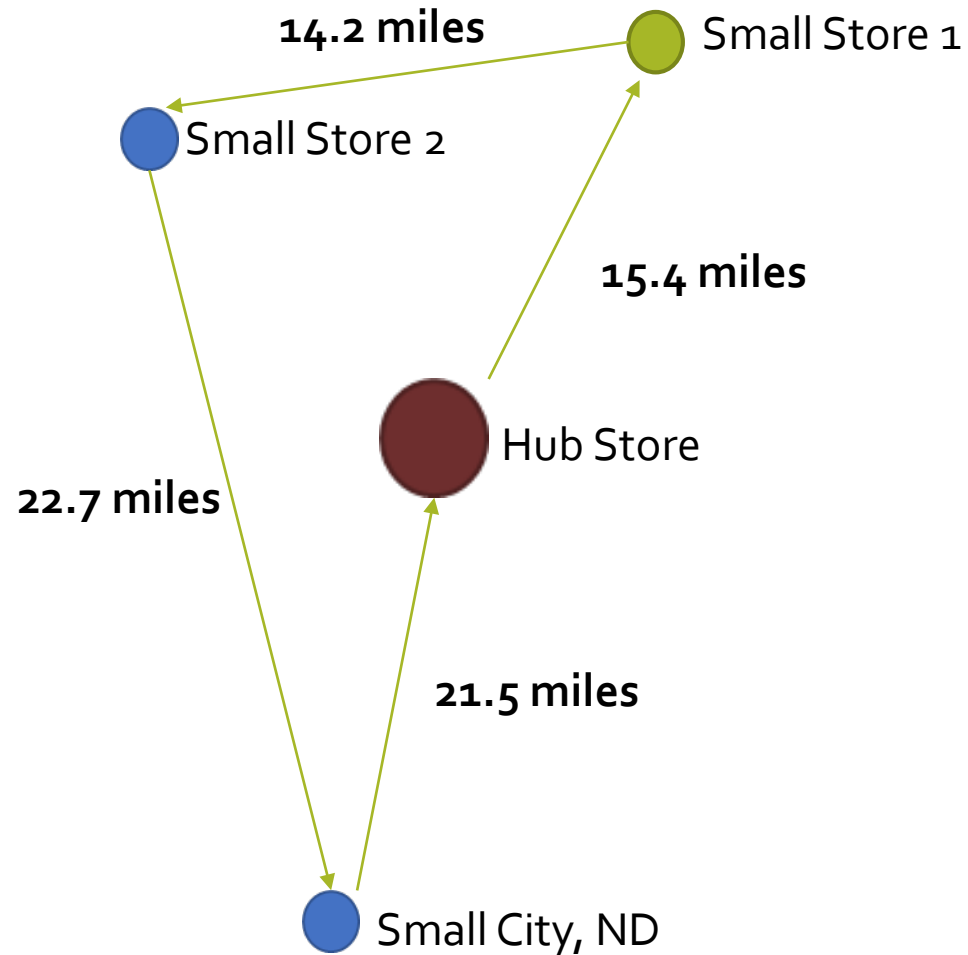
- Grocery Hub – Weekly Deliveries from Grocery Distributor
- Hub Store purchases and operates a T4 Solutions Locker in Small City, ND
- Hub Store projected purchases for Small City T4 Solutions Locker at \$3,225 per Week
- Weekly Average Net Margin for Hub Store from Small City Locker = \$806
- Weekly T4 Solutions Locker Costs by Hub Store = \$620.00
  - Mileage - \$100/week (one delivery per store per week – 50 miles/week @ \$2.00/mile)
  - Labor - \$160/week (8 hours/week @ \$20/hour)
  - Administration/Warehousing - \$60/week
  - Overhead Costs - \$300/week (Includes Purchase of \$65,000 Unit)
- Weekly Distribution Model #2 Savings = \$186.00

# Walsh County Distribution Analysis #2 Summary

1. Placing a T4 Solutions Locker in a Community that can Generate Increased Grocery Sales May Be a Viable Option
2. Assuming Weekly Sales Volume of \$3,225 at a 25% Gross Margin at \$806
3. T4 Solutions Locker Weekly Costs Estimated at \$620
4. The Hub Store Could Obtain an Income Increase of \$186 per Week

# Park River Distribution Hub Potential Distribution Route

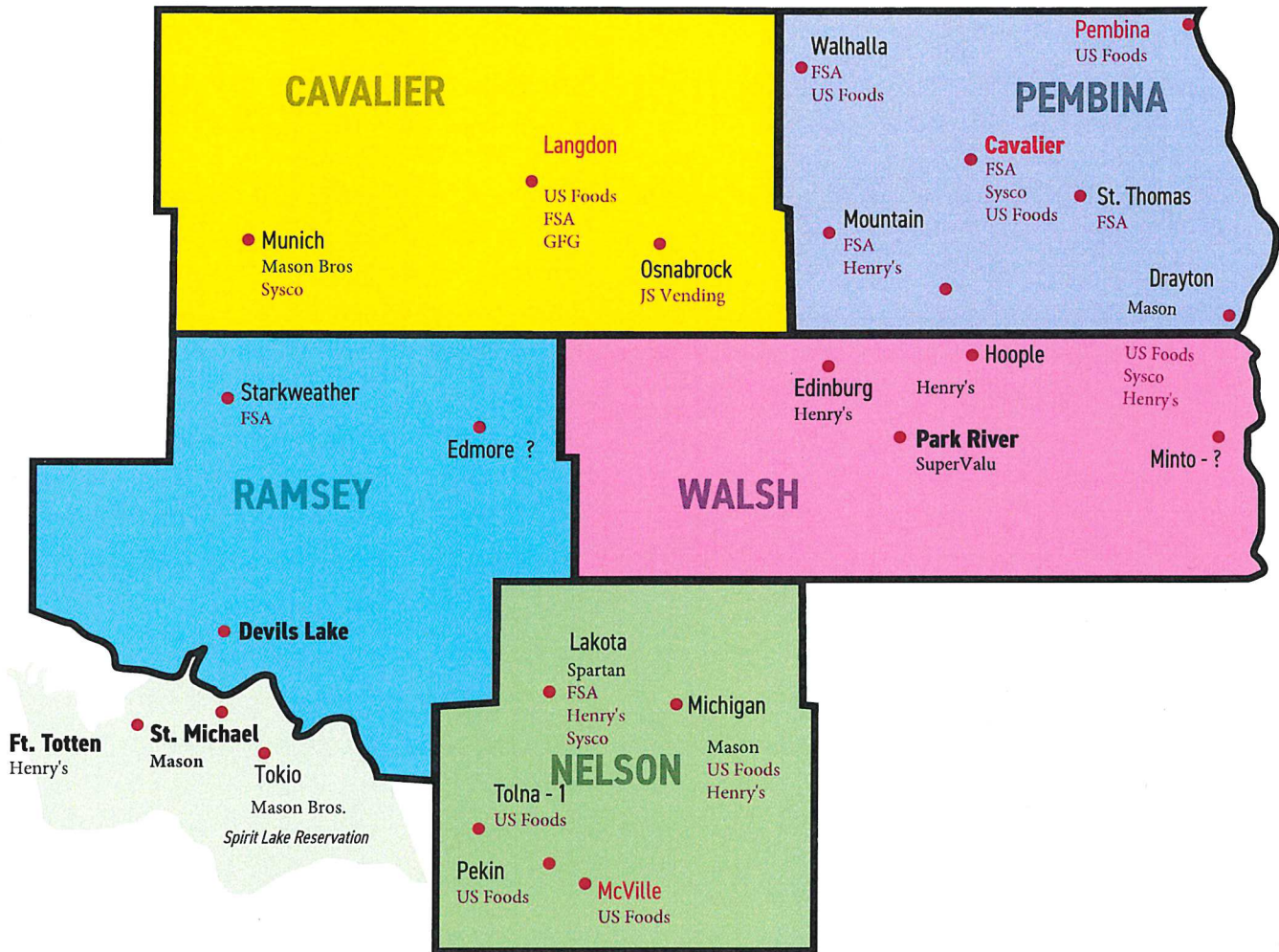
Two Grocery Stores and One T4 Solutions Locker



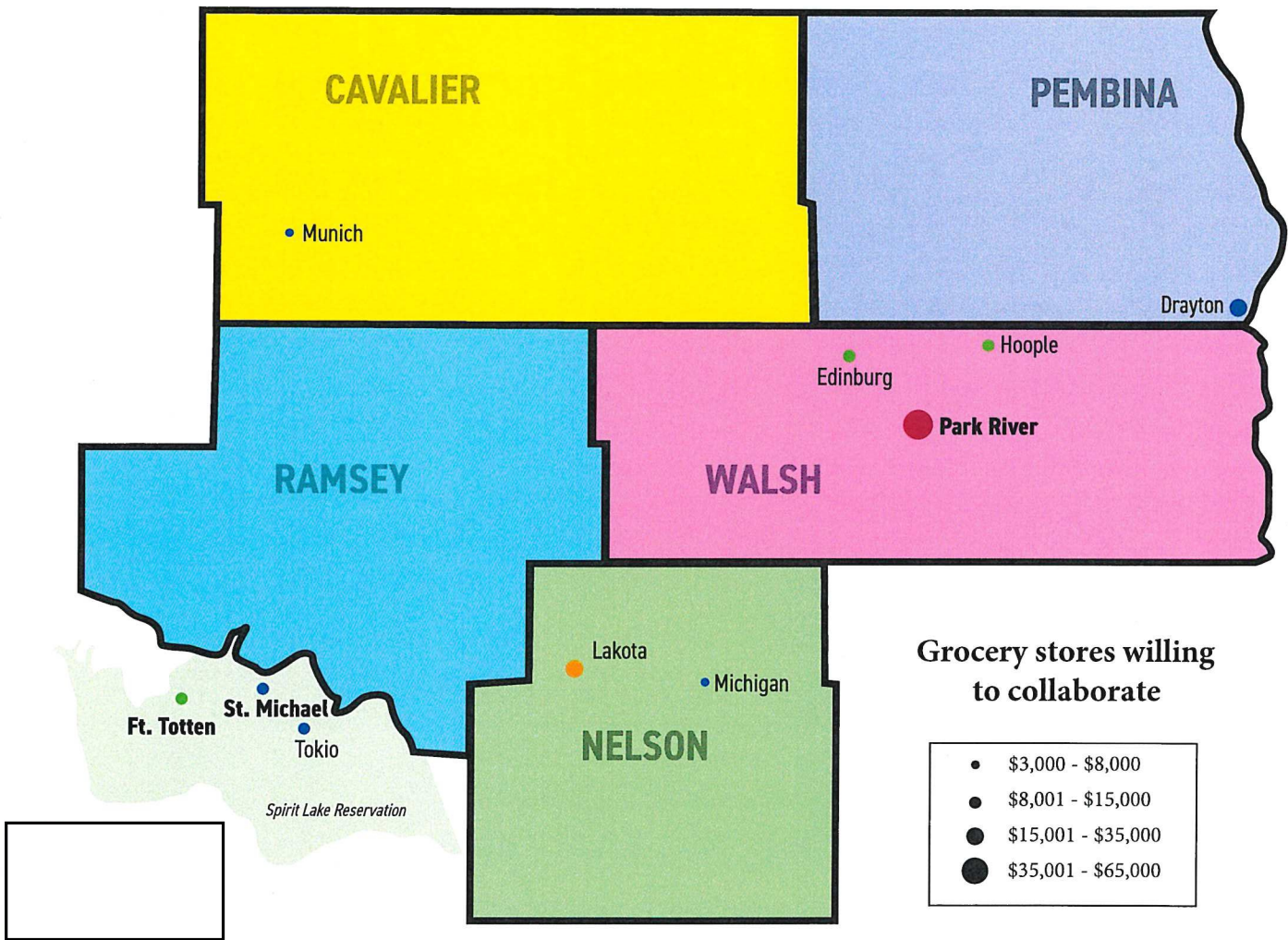
**A Combined, Weekly Distribution Route from the Hub Store to the Two Small Stores and to the T4 Solutions Locker in Small City, ND Could Generate Nearly \$400 per Week in Profitability for Hub and Also Provide nearly \$200 per Week in Purchase Savings for the Two Small Grocery Stores.**

Date: 10/18/18

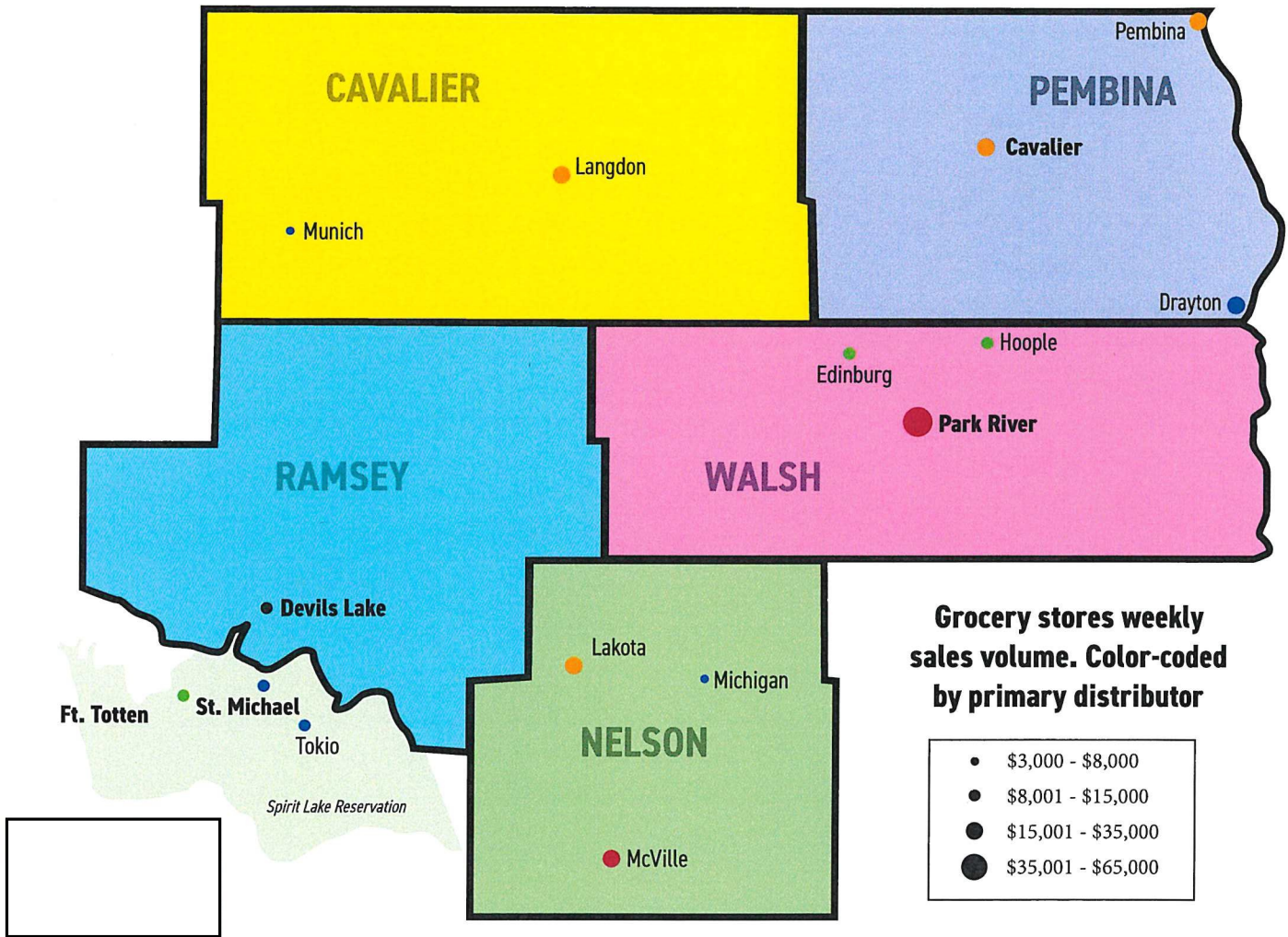
## Suppliers by City



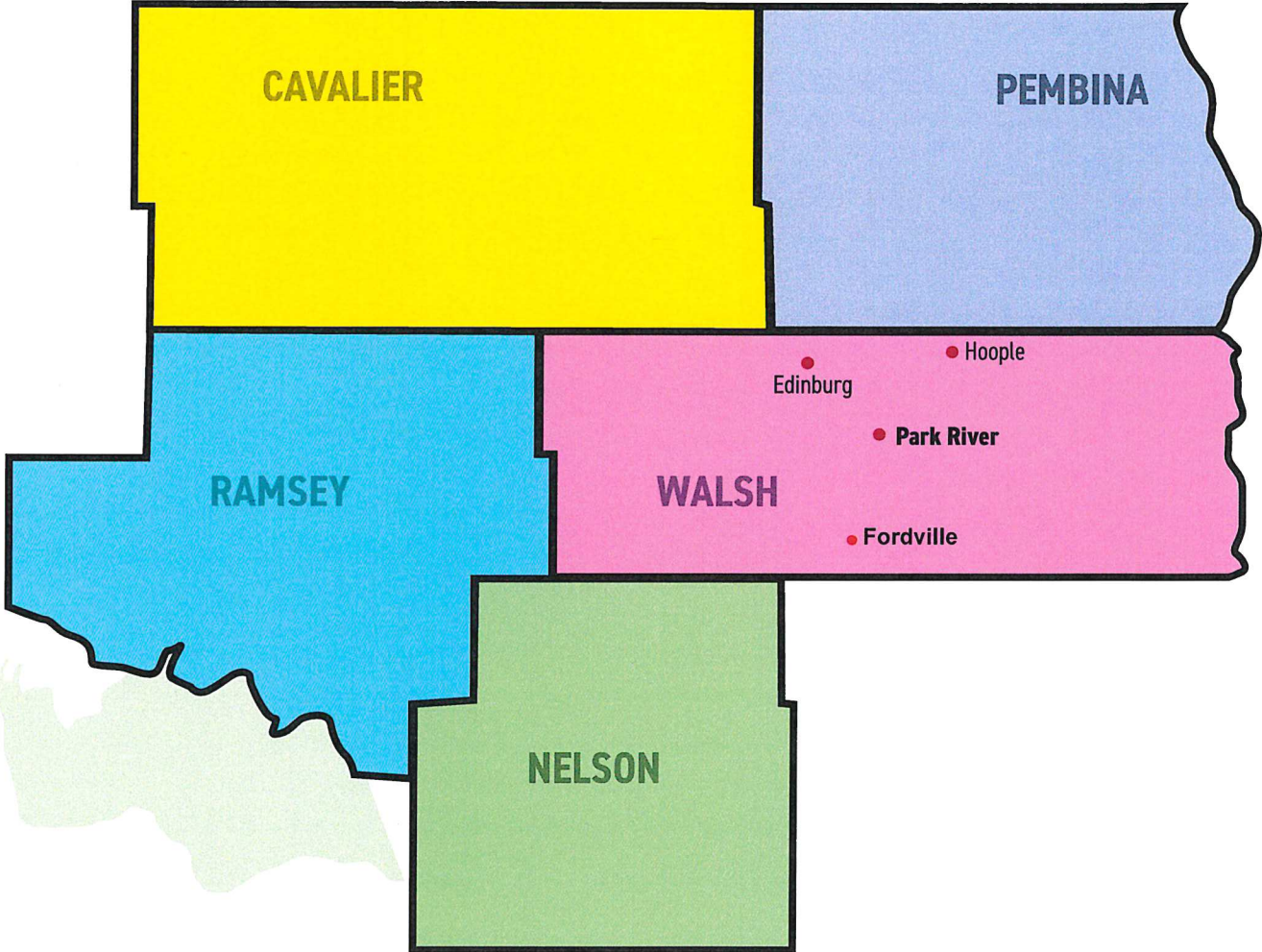
DATE: 10-22-18



DATE: 10-22-18



# Emerging Hub



**SENATE CONCURRENT RESOLUTION NO. 4013**

Introduced by

Senators Dotzenrod, Kannianen, Klein, Vedaa

1 A concurrent resolution directing the Legislative Management to considering studying the  
2 distribution and transportation of food in the state necessary to the lives of individuals in rural  
3 communities, and the roles of state entities in facilitating the movement of food to rural areas of  
4 the state.

5 **WHEREAS**, since 2013, North Dakota has lost 15 percent of its grocery stores in towns  
6 with populations of fewer than 2,100 people; and

7 **WHEREAS**, small profit margins in the grocery store business make it difficult for store  
8 owners to keep up with building and infrastructure needs; and

9 **WHEREAS**, a considerable number of the state's population drive more than 10 miles to  
10 reach a grocery store that offers fresh milk, bread, meat, fruits, and vegetables; and

11 **WHEREAS**, there is a strong negative correlation between the distance people drive for  
12 food and those people's health; and

13 **WHEREAS**, the North Dakota Rural Grocery Initiative task force is studying the financial  
14 feasibility of collaborative purchasing, aggregation, and public-private partnerships to make the  
15 best use of existing infrastructure to improve the access, affordability, and variety of food in rural  
16 locations in the state; and

17 **WHEREAS**, it is imperative the state examines the law regarding the regulation, inspection,  
18 and health requirements that restrict some foods to limited distribution channels;

19 **NOW, THEREFORE, BE IT RESOLVED BY THE SENATE OF NORTH DAKOTA, THE**  
20 **HOUSE OF REPRESENTATIVES CONCURRING THEREIN:**

21 That the Legislative Management consider studying the distribution and transportation of  
22 food in the state necessary to the lives of individuals in rural communities, and the roles of state  
23 entities in facilitating the movement of food to rural areas of the state; and



Sixty-sixth  
Legislative Assembly

- 1        **BE IT FURTHER RESOLVED**, that the Legislative Management report its findings and
- 2 recommendations, together with any legislation required to implement the recommendations, to
- 3 the Sixty-seventh Legislative Assembly.

that persist, I would like to introduce Lori Capouch, our Rural Development Director.

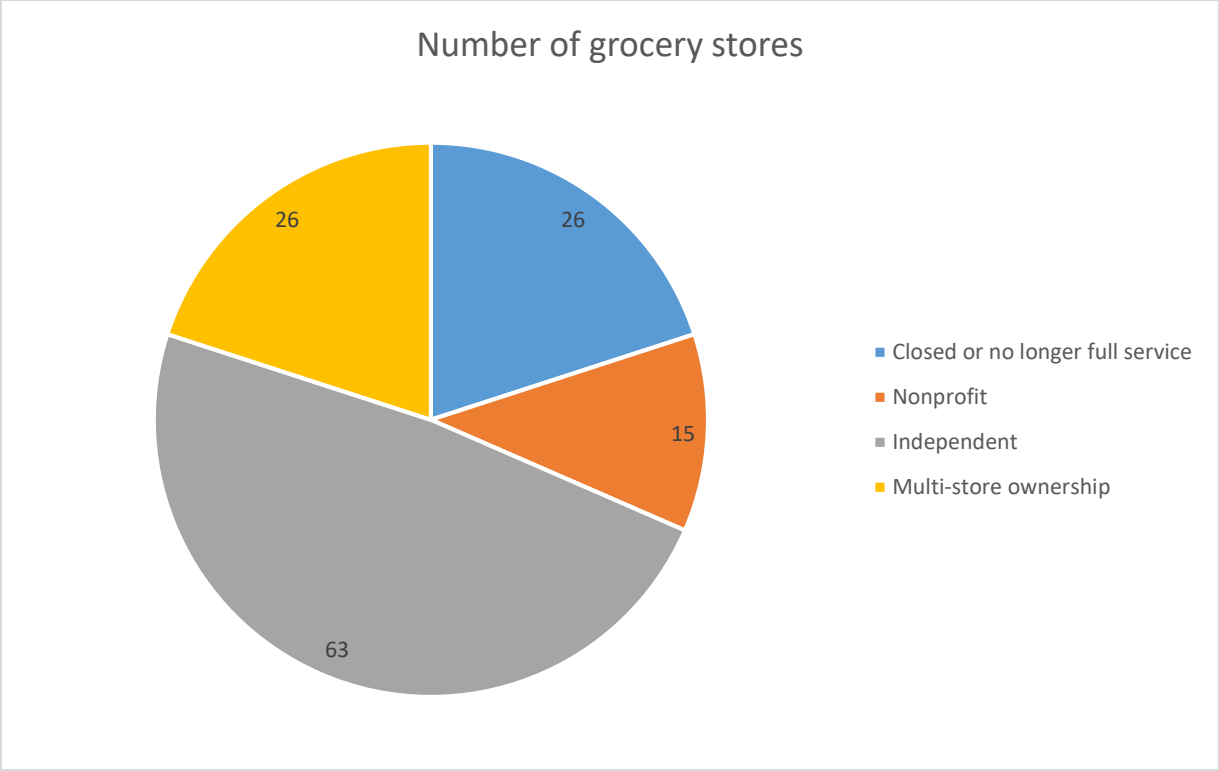
Lori is not a lobbyist, but rather a developer who has organized an important coalition of stakeholders committed to this important cause.

### ***Rural Electric and Telecommunications Development Center***

Chairman Johnson and members of the House Agriculture Committee, my name is Lori Capouch and I am the rural development director for North Dakota's electric and telecommunications cooperatives. Our work focuses on quality of life for rural people and we serve as the facilitator for the North Dakota Rural Grocery Initiative<sup>i</sup>. We are here to voice our concern about the decline in the rural grocery sector in the state of North Dakota and our concern for rural people and our communities. The rural grocery sector does not have the human or financial capital to address this issue on their own.

### ***Declining number of rural stores***

We became involved in this work about 5 years ago. We were receiving an unusual number of calls for help from rural grocery operators, indicating financial distress. At that time, we documented 137<sup>ii</sup> stores in North Dakota towns with 2,100 people or less. As of today, there are 104 stores remaining. There are approximately 10 more indicating ongoing concerns. Of the 104 remaining, 15 are community owned or nonprofit. Providing access to food in rural areas is increasingly becoming a volunteer and donation driven proposition.



*In Communities of 2,100 or less:                    2013 baseline: 137 operating stores*

*January 2019: 104 operating stores*

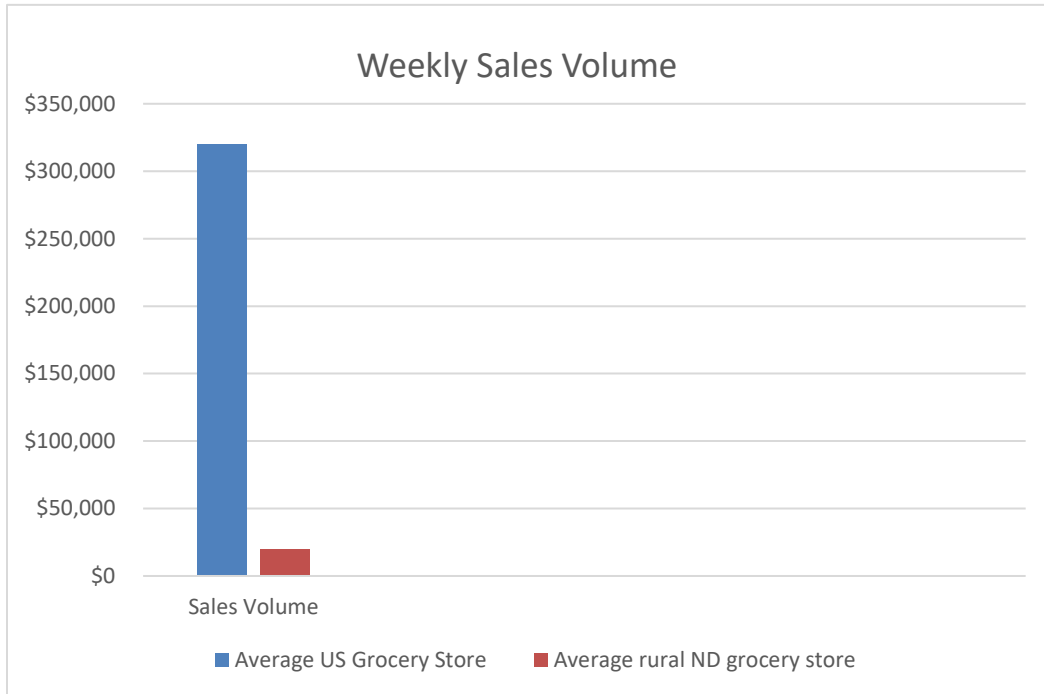
*(Estimates – there is no actual reporting system)*

*(Operators purchase multiple stores to increase profits and to purchase in volume to bring down the wholesale cost of food.)*

**Low sales volume/low profit margins**

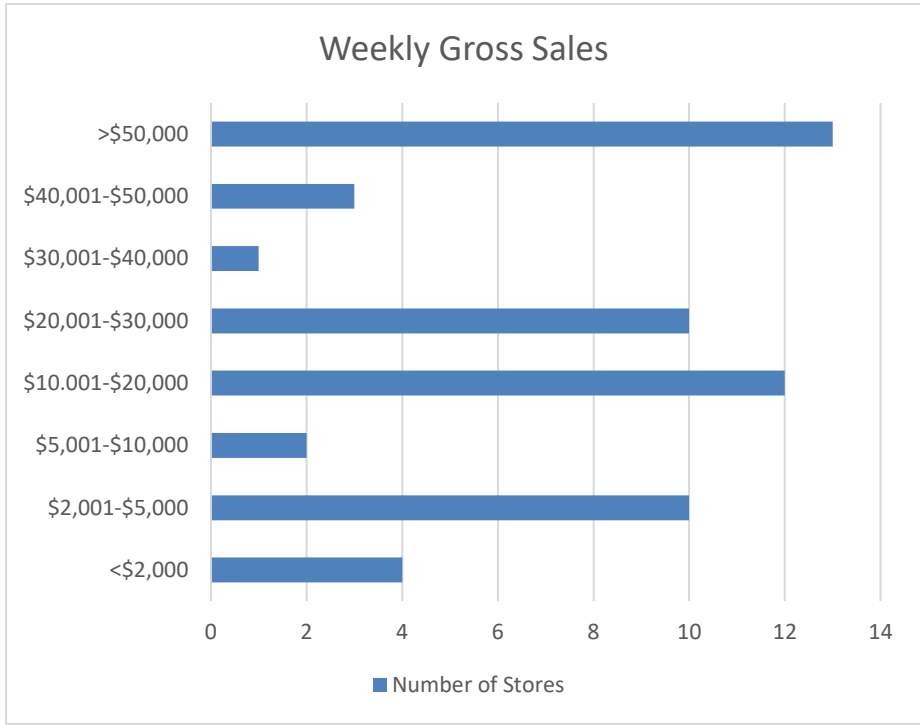
Since 2014, we have collected data from the rural stores three times. We discovered there are a host of issues leading to the loss of our stores. We learned the industry is based on volume. Stores with a higher sales volume can secure a lower wholesale price and they receive better management tools from the supplier. An

average US grocery store has a weekly sales volume of \$320,000. More than 50 percent of our rural stores have a volume of \$20,000 per week or less.



*2016 data –  
"Supermarket  
News" and  
2016 N.D.  
Rural Grocery  
Survey*

Low sales volumes lead to low profit margins. More than 50 percent of our rural stores of have an annual net profit margin of \$18,000 or less. Some owner/managers pay themselves after the margin is set. We delivered the surveys in person, with help from NDSU Extension, and noted that many of our stores are in older buildings and have aging equipment. Often, cash flow or reserves cannot support the needed maintenance and updates. On several occasions, we have scrambled to help secure grant dollars from private entities when equipment fails

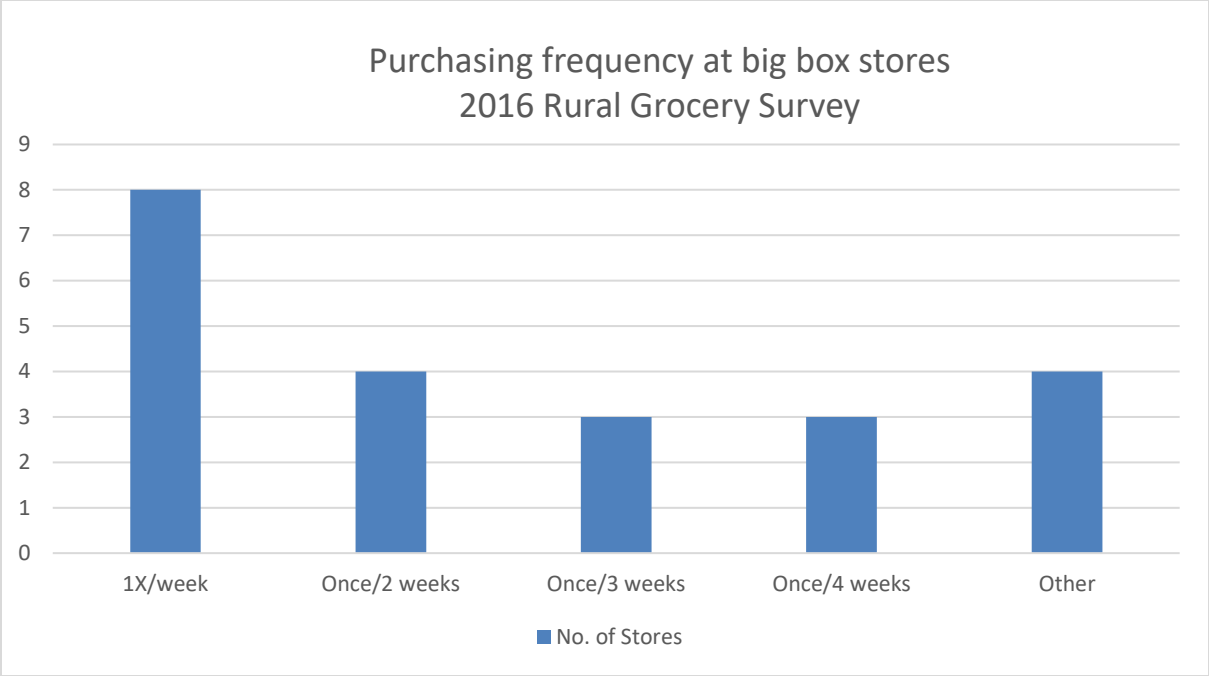


*Weekly Gross Sales  
Among 55 Store  
Respondents. 28 of 55  
stores have weekly sales  
of \$20,000 or less (51%)  
  
Average net profit  
margin = 1.75%  
  
\$20,000 X 52 X 1.75% =  
\$18,200/ann. net profit*

*2016 Rural grocery survey. Chart prepared by N.C. Doty & Associates, LLC*

***Difficulty securing products***

We learned our smaller stores have difficulty accessing certain products from a wholesale supplier for a variety of reasons, such as their volume is too low to attract the supplier of a product or they cannot afford to carry the item at the price offered. Some stores have difficulty securing common products such as bread, milk or fresh meat. Several store operators drive to urban centers to secure products from big box stores for resale at their stores to improve their price or variety. They purchase these items at a retail price plus travel time and costs.



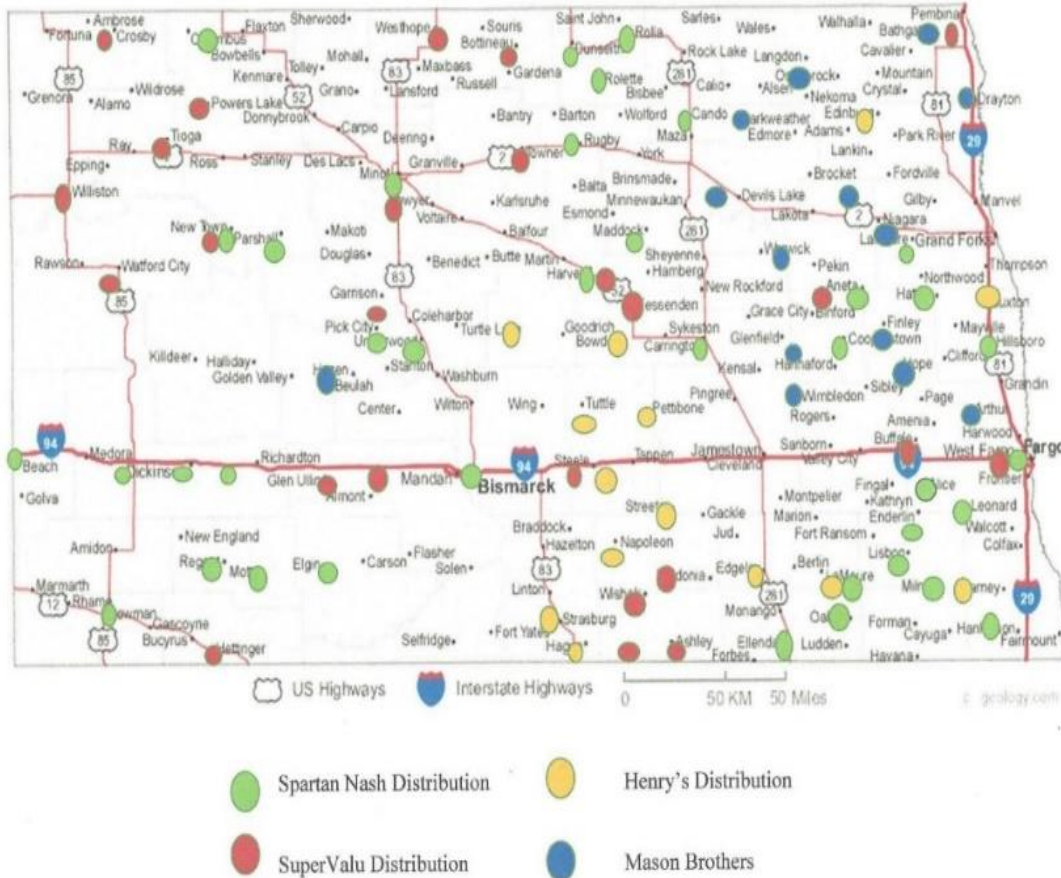
***Business succession***

Business succession is also becoming a problem. Due to the lack of profit, it is difficult to sell or finance a store when it becomes available for sale. There is also a lack of people with adequate experience needed to manage a grocery store. At this point, the store is usually transitioned to a community owned or nonprofit store or it closes.

***Distribution efficiencies***

Finally, based on preliminary data, it appears the current distribution system does not effectively serve rural areas. Supplier routes are primarily based on volumes rather than route efficiencies. And, product is priced according to volume purchased. We currently have four major suppliers that crisscross routes with similar product, delivering to customers that meet their minimum purchasing requirements.

*Mapping of primary supplier by store*



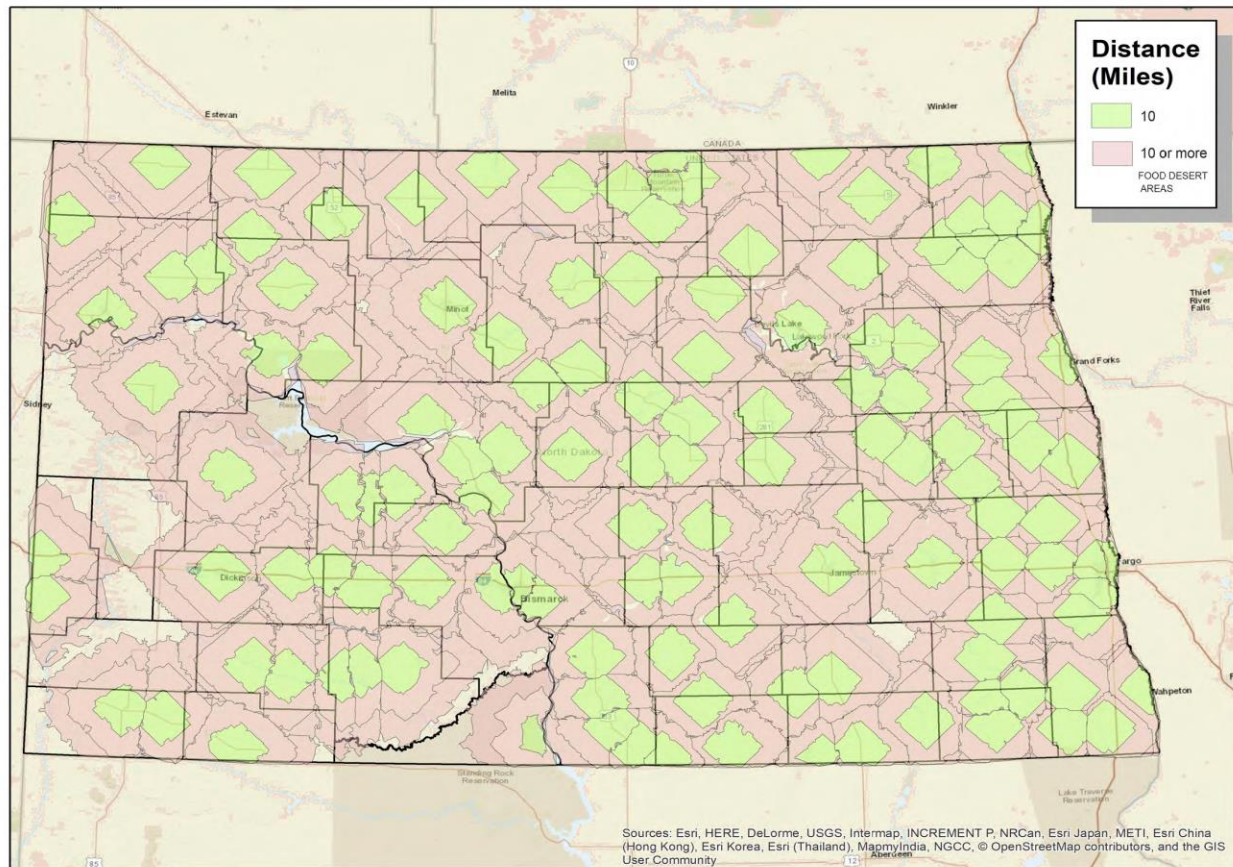
*Prepared by N.C. Doty & Associates, LLC 2017. This data was used by Upper Great Plains Transportation Institute (UGPTI) to determine current distribution routes and to optimize routes. By simply optimizing routes of primary suppliers, UGPTI estimated an annual savings of \$383,448.*

To help you understand the consequences of this decline, you can liken it to the dairy industry. As our number of farms dwindled, the infrastructure supporting that industry diminished. It became more difficult to find markets, holding stations and processors. Much is true with the grocery industry. As the number of stores decrease, it will become more difficult to attract suppliers or equipment dealers. And, those that we do attract will come with a cost.

## **Food deserts**

Rural people work hard to keep their grocery store. They understand they need it – it's a pillar in their community. Most families will not relocate to areas where there isn't access to a full-service grocery store. The towns need new families to populate their schools and to work in their main street businesses. Their health depends on it. The United States Department of Agriculture has documented there is a higher incidence of obesity and diabetes in food deserts.

### ***North Dakota Food Deserts – 12/2018***



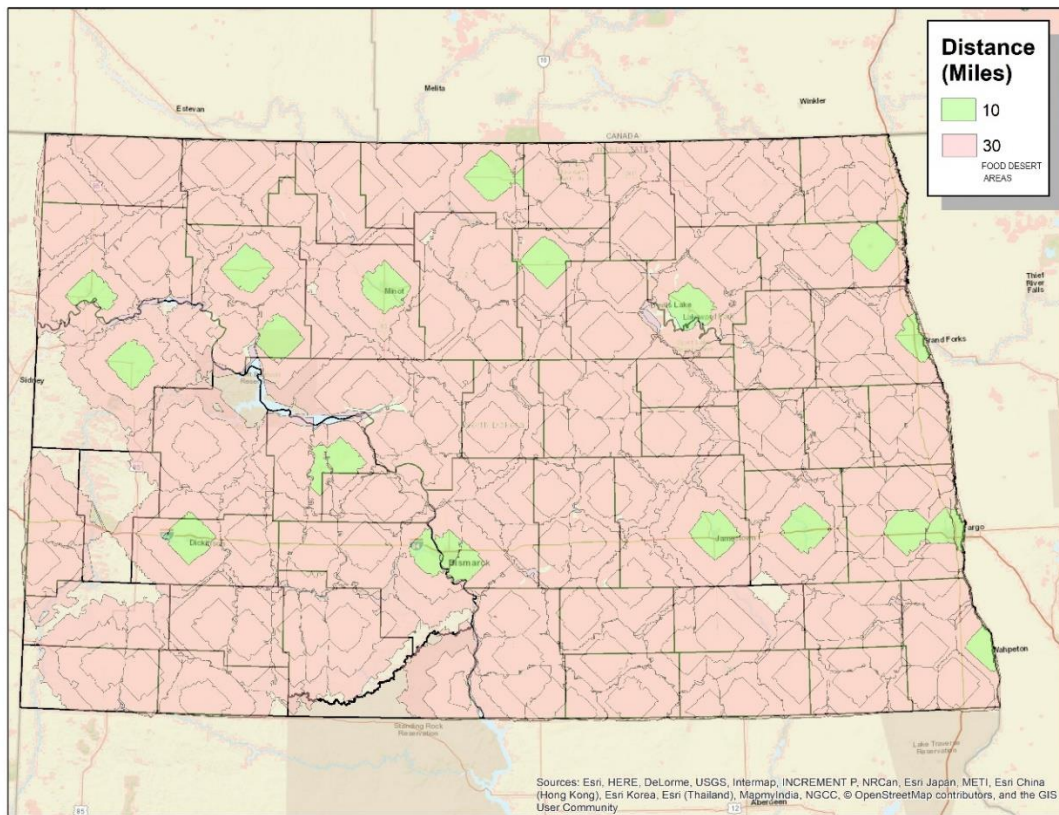
**Green** indicates an area with a full-service grocery store and a 10-mile radius surrounding the store.

**Red** indicates food desert areas. A rural food desert, according to USDA is an area where people need to drive 10 or more miles to access a full-service grocery store. People living in a food desert have a higher incidence of obesity and diabetes.



We are here today because we have a concern for rural people and their communities. We believe that access to healthy food is a necessity, not a luxury. And, we believe there may be opportunities to improve the stability of our rural grocery sector through collaboration and private/public partnerships. We are not trying to replace the current distribution system, we are seeking ways to help serve rural places more effectively. To do so, we need all the players at the table, thinking together. We thank you for your time.

**This is what food access would look like without our rural grocery industry**



Communities with a full-service grocery store and a population greater than 2,100

*This work has been funded by CoBank, an anonymous donor, the Bush Foundation and the rural electric and telecommunications cooperatives.*

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<sup>i</sup> North Dakota Rural Grocery Initiative task force members are the North Dakota Association of Rural Electric Cooperatives, Broadband Association of North Dakota, Creating a Hunger-free North Dakota Coalition, Dakota College at Bottineau, North Dakota Farmers Union, North Dakota Grocers Association, NDSU Extension, Great Plains Food Bank, Bowdon Community Cooperative, Market on Main (Edinburg), Main Street Market (Hazelton), Star Grocery (New Leipzig), Tuttle Community Store, Wangler Foods (Casselton) and Wimbledon Community Store

<sup>ii</sup> There is no publicly available system to track the status of grocery stores in North Dakota. Of the 137 identified stores, some have closed, and some are no longer considered full service.