SECTION 3

About Telecommunications BusinesScores 4.0

What is Telecommunications BusinesScores 4.0?

Telecommunication BusinesScores 4.0 is the fourth generation of a unique data product providing usage estimates of the key telecommunication services for every record in the D&B database of approximately 13 million business establishments, including some 8 million buildings. These unique estimates are derived from TNS Telecoms' (TNST) proprietary primary data, gathered from multiple waves of its quarterly *BusinessWave™* telephone survey totaling over 30,000 business firms (see *Appendix 2 – "The BusinessWave Survey"*). The original, core variables in Telecommunications BusinesScores 4.0 are designed to cover the major sources of business telecommunication spending, product presence and usage, and other geographical and building attributes, at the *individual business location*, and contain the following types information:

- Point & Census Geocodes
- LATA Code
- V&H Coordinates
- CDP and CSD FIPS Codes
- MSA/CMSA/PMSA Code
- Urban/Rural Flag
- CPL Code
- Total firms in building
- Total building Local Bill
- Total bldg. Toll Bill
- Total bldg. Toll minutes
- Total building access lines
- ILEC Code
- Number of Working Telephone Numbers
- CLLI-11 & CLLI-8 Codes

- Total Communications Bill
- Total Wireline Bill (by All, Voice, & Data applications)
- Total Wireless Bill
- Total Local Phone Bill
- Total Toll Bill (by both intraLATA & interLATA)
- Total Toll Minutes (by both intraLATA & interLATA)
- "1-800" Bill & Service Probability
- International Calling Prob.
- Centrex Probability
- PBX Probability
- Other types Probability
- Distance to the C.O.
- Flags by Data Services type

- Consolidates and Site Broadband Demand
- Business Internet Access Probability
- Probability of Hi-Speed Internet Access
- E-commerce Utilization for Selling & Purchasing
- Probability of Data Lines
- Probability of xDSL Lines
- Probability of T-1 Lines
- Probability of T-3 Lines
- Switched Bus. Access Lines
- Probability of Special Access Business Lines
- Probability of Private Lines

The "types" of Telecommunications BusinesScores can be broken out into six distinct categories

1. *Demand Estimates*: contain information on volumetric estimates of telco-related demand, such as estimated local phone bill, intra and interLATA toll bill, wireless bill, switched access line equivalents, etc.

2. *Need Indicators:* provide insights on the probabilities of specific types of services being in-place at the firm, such as Centrex systems, PBX systems, private lines, etc.

3. *"CPL" Building Data:* include the **CPL Code** that identifies the unique building, as well as aggregations at the building level (based on summing-up the contributions of all the tenants in the building), such as total firms, total spending, total lines, etc

4. *Bandwidth Measures:* contain the "Broadband Demand" suite (the Consolidated Broadband Demand and Site Broadband Demand scores), and other related scores, such as the "Data Services Range Flag" variables.

5. *Central Office & Wire Centers:* provide information on the ILEC Central Office and Wire Center associated with the firm via TNST's proprietary assignment methodology and via more traditional GIS-based Wire Center boundary assignments, and the distances between the firm and these C.O.s.

6. *Geographic Identifiers:* includes Telco geographies associated with the firm, such as ILEC Service Area Code and LATA Code, as well as the most accurately assignable values for Census Geocode (down to the Census block) and point geocoordinates (in latitude/longitude).

Having this many different categories and variety of Telecommunications BusinesScores data elements provides users with the ability to address the widest range of telecommunications applications available, at the greatest degree of consistency and accuracy available for modeled data.

Why were Telecommunications BusinesScores built?

Ongoing deregulation of the telecommunications industry, the rapid pace of technological innovation and development in the industry, and the volatile corporate changes happening even to the largest players in the telecommunications industry, are creating a highly competitive and dynamic market. Traditional telecommunication providers are looking to expand and protect their customer base and need to identify their best customers, while targeting new prospects that are like them. New providers of telecommunications products and services often have offerings that are best suited to a select "niche" of all firms, and are trying to grow their share of the market at the expense of the established incumbents. The Telecommunications BusinesScores were built for firms in or associated with the entire communications industry to satisfy a growing demand for detailed telecommunications descriptors and usage estimates by *individual firm* – or by *individual building* – based on the company's definition of exactly who constitutes the actual telecom end "customer".

The Telecommunications BusinesScores are designed to allow telecommunication product and service providers to design efficient sales and marketing campaigns by enabling these firms to select their target customers, using direct and relevant criteria. For example, a telecommunication provider may have designed an offering that is likely going to be of interest to those firms who have a PBX system. Instead of randomly marketing to all firms or selecting firms based on a simple criterion such as number of employees, the service can now directly select only those firms that have a high probability of actually having a PBX system. The Telecommunication BusinesScores are designed to allow for precise targeting of customer or

prospect lists for any telecommunication product or service provider, or for any other firm with a need to have both strategic and tactical estimates of detailed telecommunications-related information, at a detailed or aggregate level.

Who built them, and what are they based on?

The modelers and industry experts at TNST built the first generation of syndicated Telecommunications BusinesScores in late 1995, as part of a strategic alliance formed with the Dun & Bradstreet Corporation. The first commercial offering of Telecommunications BusinesScores was made through D&B in 1996 under the name "Telecom Demand Estimators".

The earlier generations of these models were created through the use of two main sources of primary, proprietary data. The first source was actual usage data from an integrated billing database of over 880,000 firms from an industry consortium called the *National Telecommunications Demand Study* (or "NDTS" – made up of representatives from all the major local phone companies – which was administered by PNR and Associates, the predecessor to TNST). The second source was PNR's *BusinessWave* survey of 3,500 businesses (which was initially run as an annual, diary-recall survey from a pre-recruited panel), then linked to Dun & Bradstreet firmographic data and offered as syndicated, value-added data elements to D&B's national D-U-N-S file.

Several years later, PNR and Associates was absorbed into INDETEC International, Inc., a San Diego-based consulting firm that specialized in cost modeling and expert testimony for state telecommunications regulatory proceedings. In November 1999, INDETEC International was acquired by Taylor Nelson Sofres, a UK-based corporation that is the fourth largest marketing research company in the world, and currently does business in the United States under the corporate business sector name of "TNS Telecoms", or "TNST".

Along with the evolution of TNST, the BusinessWave survey evolved as well, growing and changing, until it has reach its current state: a 45-minute, guided telephone interview from a continually changing, nationally representative sample of some 3500 business firms per quarter. The content and size of the BusinessWave survey has grown so large that TNST has now been able, by aggregating the most recent eight quarters of the survey, to move to the BusinessWave data as *the complete and single underlying source* for all Telecommunications BusinesScores modeling content.

Each year, TNST regenerates the core models underlying the Telecommunications BusinesScores data elements, based on the most recent multi-wave set of *BusinessWave* data (comprised of approximately 30,000+ records), and also refreshes the entire D&B D-U-N-S file each month with the most current data elements. TNST has also automated the process of creating and validating the models to the point where it may be possible, in the near future, to completely re-build and update *all* of the models (using the latest eight quarters of aggregated BusinessWave data) every 90 days, to ensure that users are always working with the most recent view of the current telecommunications market.

When were they built?

The vintage of the data for the current 4.0 version of BusinesScores ranges from year 2001 to 2003, depending on the specific release. The models were initially developed in the first and second quarters of 2003, from the most recent 8 quarterly "waves" of the *Business Wave* survey data at the time. This most recent version of the entire product will be rolled out in the third quarter of 2003. TNST is also greatly expanding the quantity and scope of the Telecommunications BusinesScores data elements, to keep pace with the demands of the telecom industry's increasingly sophisticated requirements, so there may additional variables released in the near future as optional supplements to the data elements described here.

How were they built?

The *BusinessWave* data records were statistically analyzed to develop estimates for all firms on the D&B database. TNST takes the approach that, rather than imbedding any subjective assumptions in the models themselves, the models should allow the data to speak for itself by reflecting actual behavior, based on real-world data at the firm level. TNST uses an advanced and proprietary statistical modeling processes to create the *BusinesScores* underlying models, so that every record in the D&B database that goes through the scoring process receives a set of BusinesScores data elements, irrespective of the completeness of the D&B firmographic information.

Two of the later enhancements used in the most recent version of the Telecommunications BusinesScores modeling process involve:

1) Transitioning to a view of a firm's "access lines" in terms of "access line equivalents" (a "line equivalent" being a 56 Kbyte slice of digital switch bandwidth); and,

2) Segmenting the business firms into four distinct types of "access line equivalents" which consist of:

> **"Non-PBX" (POTS & Centrex) lines.**
>
> **"PBX" lines using "Regular" trunks.**
>
> • **"PBX" lines using "T1-based" trunks.**
>
> • **"PBX" lines using "T3-based" trunks.**

Both of these enhancements capture the effects of the different options that can be used to address a firm's overall communications requirements using new technologies, the extensive business use of the internet and the growth of the demand for bandwidth, and the convergence of voice and data traffic requirements through the use of advanced digital switches.

More detailed information on the Telecommunications BusinesScores modeling methodology, and how they are applied to the D&B national file appears in *Section 4: "The Modeling and Scoring Process".*

What does "Version 4.0" mean?

"Version 4.0" refers generically to any of the releases in late 2003 of the Telecommunications BusinesScores created under the new, fourth-generation methodology. This new generation of the product now brings many new additional data elements to the users, due to the much wider variety in the self-reported behavioral information collected by the *BusinessWave* survey.

What makes the current product release different from earlier versions?

The release of the Version 4.0 product represents far more than a normal annual update of the Telecommunications BusinesScores models. It represents the combined technical advances from Version 3.x, on three simultaneous fronts, as well as being the first version of the product where all of the models (including the new Broadband Demand data elements) are completely driven by the BusinessWave survey data, offering the following benefits to all current and potential clients:

1. The Most Current and Comprehensive Source of Detail Data Available.

By switching the basis of the BusinesScores models from the NTDS billing data, to the combined multiple waves of TNST's *BusinessWave* survey interview data, the models can now provide a much more accurate view of the telecommunications environment – as it exists *today*. This is absolutely critical for data accuracy, as more has happened in the last several years in the telecommunications industry than at any other time in history. The *BusinessWave* database of the results of approximately 30,000 45-minute telephone interviews contains a much greater variety of the critical, current data needed to address the desired information requirements of today's telco clients.

2. Improved Modeling Methodology.

As the telco market became more intensely competitive, it was obvious that it would be less and less likely to maintain a consortium of local providers to continue to supply the type of information historically used to create Telecommunications BusinesScores data elements. This was one of the reasons that TNST initiated its *BusinessWave* initiative over seven years ago – to be prepared for this eventuality, *and* to have access to a wider diversity of data at the firm level.

Making the inevitable transition between these two data sources required moving from the "deep" (large number of records) but "narrow" (limited number of variables available) data in the NTDS sample universe, to the "less deep" (fewer number of records), but very "wide" (broader number of variables) sample universe afforded by the multi-wave *BusinessWave* survey. This was absolutely necessary to be able to bring to the market the breadth of information requested by the more innovative clients for more technologically advanced applications.

TNST's modifications to its modeling methodology were designed to achieve *two core objectives:*

- To provide the same level of predictive performance at the firm level as the earlier product – *or better*, where possible – for the vast majority of the D&B business universe; and,

- To more accurately reflect the changes in the industry happening as a result of new technologies that now provided alternatives, at differing levels of economies of scale, for a firm's overall voice and data communications requirements, through the use of T1- and T3-based digital switches.

3. Greater Quantity and Variety of Data Elements Available.

The overall net effect of the combination of the changes brought about in the two factors above is that now a far greater variety of current and directly relevant variables can now be made available to clients to enable them to address many more applications – at a higher degree of accuracy – then previously possible. To accomplish this, brand new variables are being introduced to address such new areas, such as the differences between voice and data applications, wireless usage, toll-free calling number propensities, and "special access" line indicators. Also, key enhancements and modifications have also been made to several of the currently existing variables to improve their performance, or to make them more relevant in today's environment. Detailed listings of these data element changes appear later in this document.

What are the key Version 4.0 data elements, and how are they used?

Here are some of the basic variable categories in Telecommunications BusinesScores 3.0, and some of the ways they are used in telecommunications applications:

- **D-U-N-S Number: (a D&B field)** A unique 9-digit number, assigned by Dun & Bradstreet, that identifies a unique, individual business firm location in the D&B national database of over 13+ million establishments. This key field enables the Telecommunications BusinesScores data elements below to be linked back to the individual firmographics of each location on the main D&B file, or to be linked to client's own customer database (if it also carries the D-U-N-S number on each record) as customer "file overlay" enhancements.

  Census Geocode: A field assigned to each record *after* TNST re-geocodes the original D&B file to get down to the Census Block level of detail (for the majority of all the geocodable records on the D&B file). This represents a geographic area about 30 times smaller than the Census Block Group currently on the file. The field is in full FIPS format, indicating the State, County, Census Tract, Census Block Group, and Census Block where the firm is located. This data is particularly valuable for applications that require summary counts of select firms or related variables by geography — in a database environment — prior to mapping the results with a GIS tool. (*Example: Displaying "Number of Business Access Lines by Block" on a GIS map, using a combination of BusinesScores, D&B data, and block-level mapping boundaries.*)

Geocode Match Flag: A code indicating the accuracy at which the Census Geocode is assigned to a given firm, based on match attempts against the firm's address information. The flag indicates whether the code is assigned at the Block, Block Group, Census Tract, or County level of Census detail. This flag is useful in immediately identifying those records where exact geography is known, instead of merely approximated. *(Example: Linking business telephone NPA-NXX data to exact blocks in a block group, for building correspondences to Wire Centers.)*

- **Geocode Point Coordinates:** Latitude and Longitude point geo-coordinates (to six decimal places, or one-millionth of a degree) assigned by TNST during the geocoding process. Coordinates are given in MapInfo®-compatible format (in degrees, with negative longitudes). This data is critical in applications where proximity between businesses or other reference points is a concern. *(Examples: Identifying in a GIS application businesses, total lines, or estimated revenues in an area serviced by a known fiber loop; Estimating the cost of providing access to firms in a given area based on right-of-ways.)*

Geocode Precision Flag: This field is a code that defines the positional accuracy of the point coordinates that are assigned to each firm. The flag indicates whether the coordinates were assigned at the "exact address", "street intersection", "ZIP+4 centroid", "ZIP+2 centroid", or "5-digit ZIP centroid". This is useful in immediately identifying those records where the exact point location is known.

ILEC Wire Center (CLLI) Codes: This alphanumeric code is the individual Common Location Language Identifier ("CLLI" Code is a Bellcore standard) designating the Central Office (CO) that serves a given firm. The code indicates not only the name of the CO, but the state that it resides in. TNST carries both the 8-digit ILEC CLLI that it assigns to the firm, using its new methodology that adjusts for potential errors introduced by foreign exchanges and CLEC presence, as the CO that would be assigned using simple GIS-boundary spatial relationships. These are the same about 80% of the time. These fields are valuable in database applications that consolidate firmographics or BusinesScores variables to a CO level. *(Examples: Running analyses of total business lines, usage, or billings by CO to examine to cost-effectiveness of upgrading switch capability at the End Office; Mapping in a GIS environment the cost of business services, by Wire Center.)*

Distance to the ILEC Central Office: This value is the distance (down to thousandths of a mile) between the firm in question, and each of the two assigned Central Office locations described above. *(Example: Locating firms that are within a proximity-sensitive distance from their assigned Central Office location, such as determining xDSL prospect firms within the 18,000-foot engineering limit for twisted copper pair transmission lines.)*

- **LATA Code:** A 5-digit code that identifies the Local Access Transport Areas (LATAs) in which an Incumbent Local Exchange Carrier (ILEC) is allowed to operate (prior to any regulatory relief). This information helps determine number of firms, firm composition,

or total usage or revenue by telecommunications geography. *(Example: Rank-ordering LATAs within the U.S. (or for a given RBOC) — in terms of business composition, network requirements, demand for services or revenue potential — to either assess potential for growth, or to defend an existing customer base, as deregulation progresses.)*

- **Incumbent Local Exchange Carrier Code:** A 2-digit code that identifies the primary Incumbent Local Exchange Carrier (ILEC), initially limited to the major RBOCs and Independents. Useful for any aggregate level database applications that involve consolidating business lines, usage or revenue in total, or by SIC categories for a given LEC. *(Example: Estimating total business IntraLATA toll usage for a potential competitor LEC.)*

Estimated Business Access Line Equivalents: TNST's proprietary modeled estimate of the total number of circuit equivalents (units of 56 Kbytes of bandwidth) used to enter the communications network at a given business location. This data may be combined separately with TNST's *GeoScores* Residential Access Line Estimates (available separately) to analyze Total Access Lines by any level of Census or Telco geography, down to Census Block Group. An important data element for any application primarily driven by number of access lines. *(Examples: Using D&B corporate parent codes to identify total access lines by corporation; Analyzing the "small" and "medium" (generally characterized by lines, and not by employees) business intraLATA toll usage, or total toll billings in a competing ILEC's territory under competition; Understanding business composition of a market in terms of lines per firm — or lines per employee — by type (SIC) or size of company.)*

PBX Indicators: A family of PBX-related data elements, consisting of: "PBX Probability", the likelihood that a given firm is likely to have Private Branch Exchange (PBX) switching hardware on-site; "PBX Rank", a quintile "binned" version of the probability (ranging from "1"-"Very Low" to "5"-"Very High"); and "PBX Index", a relative measure of how the firm's PBX probability compares to the average of all other D&B firms (e.g., an index of "250" means the firm is 2.5 times as likely to have a PBX than the average D&B firm). The obvious value of the flag is to those firms selling PBX systems. *(Examples: PBX hardware suppliers targeting businesses to install a PBX, or CLECs targeting Centrex clients likely to migrate to a PBX system.)*

Centrex Indicators: A family of Centrex-related data elements, consisting of: "Centrex Probability", the likelihood that a given firm is likely to have Private Branch Exchange (Centrex) switching hardware on-site; "Centrex Rank", a quintile "binned" version of the probability (ranging from "1"-"Very Low" to "5"-"Very High"); and "Centrex Index", a relative measure of how the firm's Centrex probability compares to the average of all other D&B firms (e.g., an index of "250" means the firm is 2.5 times as likely to have a Centrex than the average D&B firm). The obvious value of the flag is to those firms selling Centrex services. *(Example: ILECs targeting growing businesses to move up from individual business lines to Centrex. Service providers can use the indicators to generate a prospect list of firms for Centrex, which is first de-duped against their existing business customer base who already have these services.)*

- **Estimated Total Local Phone Bill:** TNST's proprietary estimate of the total spent by a given business location on the local portion of their telephone bill. Units are expressed in dollars per month for each record. Using the D&B corporate parent linkage fields, one can identify the field offices and branches of a corporation, and consolidate the total local expenditures per month into a total corporate local expenditure per month. This variable is key for anyone attempting the local valuation of business segments (by region, size, SIC, etc.) *(Examples: ILECs targeting business prospects out of their service area for future acquisition; IXCs targeting the most profitable existing ILEC business customers for selling local telephone services.)*

Estimated IntraLATA Toll Minutes and Dollars: An estimate of the total usage of intraLATA toll (the so-called "short-haul toll" calling within a given LATA) in minutes per month, for a given business location. This may also be consolidated at the corporate or regional level, or by SIC, size, or other firmographic definitions. This is most valuable for identifying one of the most profitable — and vulnerable — components of an ILEC's service offering. *(Examples: ILECs targeting business prospects out of their service area for future acquisition; ILECs identifying their own customers vulnerable to cannibalization for cross-selling additional services to reduce loss in customer base; IXCs targeting the heavy-use existing ILEC business customers for promoting "flat-rate zone" plans.)*

- **Estimated InterLATA Toll Minutes and Dollars:** An estimate of the total usage of interLATA toll (the "long distance" calling between LATAs), in minutes per month, for a given business location. This may also be consolidated at the corporate or regional level, or by SIC, size, or other firmographic definitions. This is most valuable for identifying one of the most profitable — and vulnerable — components of an ILEC's potential new service offerings. *(Examples: ILECs targeting business prospects out of their service area for future acquisition; ILECs identifying their own customers vulnerable to cannibalization for cross-selling additional services to reduce loss in customer base; IXCs targeting the heavy-use existing ILEC business customers for promoting "flat-rate zone" plans.)*

- **The "Broadband Demand Score" Suite:** These fields are replacements for the old "Broadband Potential" data elements, and provide greatly improved accuracy and functionality for applications dealing with the overall bandwidth requirements of a firm, or the types of digital switches that would best meet their requirements. This new field is now directly proportional to a firm's normalized spending on high bandwidth services, accounting for the amount of bandwidth required, the likely type of data services used to address it, and the nationally-averaged price of these services. The fields consist of:

    1) **Consolidated Broadband Demand (CBBD) Score** – a continuous number proportional to the overall spending on the bandwidth requirements of the firm (including their bandwidth needs at the location, *plus the aggregated needs of all the subservient locations that answer to the firm*), used to rank order firms by total demand.

2) **Site Broadband Demand (SBBD) Score** – a continuous number proportional to the overall spending on the bandwidth requirements of the firm at its *given location only* (excluding the needs of any subsidiaries or branches that answer to this location), used to rank order firms by site demand.

3) **Data Services Flags ("A" through "D")** – a set of derived indicator flags, based on the Site Broadband Demand Scores, that show the which classes of data services solutions may be present at the location, based on TNST's "data services range to SBBD score" correspondence tables, where:

- **DSR Flag "A" = "No Broadband Service"** requirements.

- **DSR Flag "B" = "xDSL or ISDN (BRI)"** requirements.

- **DSR Flag "C" = "ISDN (PRI), T1, or Frame Relay"** requirements.

  DSR Flag "D" = "WAN, T3, or ATM" requirements.

The Broadband Demand Scores indicate a firm's likelihood that they have bandwidth requirements that could benefit from utilizing T1, T3, Frame Relay, or other high-end telecommunications services, and are used to locate individual firms with significant data, voice, and video communications demands. The relative measures combine the attributes of intra-firm network potential, distance requirements of intra-firm traffic, the firm's overall telecommunications requirements, and relative telecommunications intensity (lines, toll, local) for the 4-digit SIC code representing the firm. *(Examples: CLECs rank-ordering business locations by CBBD, SBBD, or DSR Flags for specific bundled service offerings.)*

- **Common Premises Location (CPL) Code Suite of Elements:** These are variables that are consolidated up to the building level using TNST's "Common Premises Location" (CPL) Code, a field that serves as a unique identifier for buildings, in the same way that D-U-N-S numbers do for individual business establishments. This is important because of the role the building manager plays in the selection of telco and energy utility carriers for the building, as usually, the tenants of the building (if a multi-tenant location) do not make this decision. Hence, the "building manager" becomes the true "client", embodying the total demand of all of the building tenants. *(Examples: CLECs targeting buildings by number of tenants, total number of business access lines, total monthly local bill, or total monthly number of interLATA/intraLATA toll minutes.)*

What other changes have been made in Version 4.0?

Effective with Version 4.0, and continuing on with each future release, TNST, working with D&B, has repackaged the existing and newly introduced variables into a series of "Modules", designed to group certain types of related variables together into aggregated "packages", loosely based on the types of applications for which they will be used. Both the delivery and the pricing of the data elements are defined by module. The initial modules that have been identified are:

The "**Geography**" Module (see *Section 5* for details)

- The "**Building Attributes**" Module (see *Section 6* for details)

The "**Telecom Spending**" Module (see *Section 7* for details)

- The "**General Telephony**" Module (see *Section 8* for details)

The "**Broadband and Internet**" Module (see *Section 9* for details)

- The "**Cable**" Module *[for future release]* (see *Section 10* for details)

The "**Wireless**" Module *[for future release]* (see *Section 11* for details)

Which data elements have changed in Version 4.0?

All data elements that have been added, deleted, or modified from their previous versions are described in detail in each of the above sections.

How do the Version 4.0 values compare to the Version 3.x values?

Detailed comparative tables for all variables that appear in both Versions 4.0 and 3.x of the Telecommunications BusinesScores product appear in each Section corresponding to the module that variables appears in. In addition, a table of the overall mean values for each of the continuous data elements in Version 4.0 appears in *Appendix 5: "Versions 3.x and 4.0 Mean Values"* toward the end of this document.

General Product Features and Benefits

Feature	Benefit
Unexcelled **Breadth and Depth** of modeled **data elements** (**6 different types**, described below) available at the household level – **now.**	Allows **immediate use** in many strategic and tactical marketing applications—individually and in combinations—to build a competitive advantage.
Type **1 – Geographic Indicators** that provide information on **Census geocodes, Point geocode** coordinates, **LEC codes**, and **LATA codes**, assigned at the individual business establishment level.	Allows the **location of business data** by telecommunications attributes in GIS applications at the individual level, or summarized at any geographical level. No one else has this range of off-the shelf, firm-based data built from **actual business firm** information available.
Type **2 – Central Office and Wire Centers** provides related information relating to the ILEC and GIS-based C.O assigned to the firm.	Allows use in **Wire Center-oriented analyses**, and **compensates for the errors introduced by foreign exchanges and CLEC competitors**, not detectable by simple LERG-based assignments.
Type **3** Element – **Demand Estimator** variables estimate a quantitative level of telco usage—at the firm level—for **access lines, intraLATA toll** usage, **interLATA toll** usage, and **local phone bill**.	Provides **greater customer insights** f or **targeting** prospects based on anticipated usage, or for enhancing customer files with data est mate for **cross-selling and up-selling** applications.
Type **4** Element – **Needs Estimator** variables estimate a qualitative level of probable telecommunications needs—at the firm level—for **PBX systems, Centrex systems**, and **Other related** hardware and systems.	Provides instant information on which prospect firms are **likely to have certain equipment**, or **likely needs** that can be met by certain telco hardware. These variables are coupled to the underlying access lines estimate methodology, so the results are internally consistent with one another.
Type **5** Element – **Common Premises Location** (CPL) data elements indicate individual building IDs, and their associated **total tenants, total business lines, total intraLATA and interLATA minutes**, and **total local phone bill**, per building.	These variables provide insights on the **overall usage at the building level**, important because choice of supplier for utilities is generally controlled by the **building manager**, and not by the individual tenants. The **CPL codes**, and related variables, are **unique to D&B. This code also links to the CPL Database** of summary building data.
Type **6** Element – **Bandwidth Measures** include the **Broadband Demand** Scores, which are used in estimating bandwidth, the data services used to address the bandwidth, and the spending for these services.	**No other firm offers a tool this comprehensive**, which goes far beyond measuring simple "channels" or "Mbps", but addresses these needs in **marketing terms**, and can **differentiate the requirements** for different solutions that appear to have the same bandwidth (xDSL vs. BRI-ISDN).
Many Telecommunications BusinesScores are **unique in the industry**, including the "Upper" and "Lower" bounds around each of the volumetric estimates.	Provides D&B **a competitive advantage**.... There is no other "off-the-shelf " syndicated product of this type and detail available in the market, including **record-by-record error measures**, for its fields.

Feature	Benefit
Telecommunications BusinesScores are built from the bottom-up, using the most recent eight waves of TNST proprietary *BusinessWave* **sample of over 30,000 survey respondents**.	Provides clients with **a major competitive advantage**.... data is current, and based on realty at the firm level with no subjective assumptions introduced. Competitive systems are **built from the top down, using aggregate government data** and projections, forced down below the level at which such projections are accurate (county), and is **not validated** against any actual firm-level data.
Telecommunications BusinesScores are built and re-calibrated annually using PNR's *BusinessWave survey* data on behavior and attitudes.	*BusinessWave* is the most **current and complete** source of quality, large-scale syndicated survey data on **actual business telecom** and utility behavior in the US.
Telecommunications BusinesScores are **linked to D&B's national D-U-N-S-numbered database**, the **largest** business database with the **widest range of firmographic data** elements in the world.	Unusual telecommunications models built from strong data sources, linked to the largest source of establishment-level data, make for a **unique and superior product**. Also, the D-U-N-S numbers **allow quick enterprise-level aggregations** of firmographics, telco attributes, and bandwidth.
Telecommunications BusinesScores were built using **TNST's expertise in the Communications, Market Research, and Information industries.**	**Industry experts** created application-specific solutions to solve real-world, **industry-specific** applications, using **actual data** as the source. TNS, the parent to TNST, is the fourth largest market research firm in the world, serving 100+ countries.
Telecommunications BusinesScores is the **only "off-the-shelf" product** built at the **individual business establishment level of detail.**	Specifically designed for **direct micro-marketing** applications, and are **immediately actionable**. Other approaches **require actual customer data**, are **expensive**, and **not nationally representative**, or are cheaper, but significantly less accurate at the firm level.
Telecommunications BusinesScores **have upper and lower bounds**, in addition to the most probable estimates, for use in both "standard" and "expert" versions, unlike any other type of business targeting tool.	Telecommunications BusinesScores **functionality grows** with the client... they can be used by both **regular** and **sophisticated** clients in a wide variety of applications... a **unique benefit**. Clients know the error ranges associated with each record.
Telecommunications BusinesScores data elements are growing – **more elements** will be added for new applications, and many are completely unique to the industry.	Telecommunications BusinesScores is a **cutting-edge product** that **keeps pace** with the growing needs of telecommunications and utility direct marketers.
Telecommunications BusinesScores models take advantage of the **interdependencies built into the models** to reflect **real-life variable relationships.**	Results of the models **reflect more accurately** the results found in **real-world data**, and the findings across models are **more internally consistent** with each other.

TBS 4.0 "Driver" Firmographics

The universe of "driver firmographics" used in the creation of the entire suite of Version 4.0 Telecommunications BusinesScores includes information from both the D&B primary and estimated firmographic data, as well as some internal TNST business cluster information. The new modeling process has streamlined this dataset to be smaller than that previously used, as TNST has eliminated "models driving constructs", which was necessary for the old "Broadband Potential" suite, and fields that were not populated for the majority of firms.

With the new Version 4.0 product, all the data elements present (that are not electronic look-ups, such as "Census Geocode") are now driven by true models, directly from the firmographics below. Even though the list of driver firmographics is somewhat smaller than with Version 3.x, but because of the new methodology, this has not hurt the overall performance of the scores in any way. Not every data element is driven by every variable shown below, but rather, by specific proprietary subsets of the information below.

The proprietary TNST process for creating the Telecommunications BusinesScores data elements also allows scoring to take place for D&B records missing any secondary or tertiary "driver" information, based on the known primary "drivers" present, for any given record. This still allows a record not having 100% of firmographic fields to be scored, as the TNST scoring software has the ability to infer the most likely values of the missing information, based on what values are present on the records, hence the high rate of codability of the D&B file.

The complete list of the "driver" elements (in alphabetical order, but no particular order of importance) includes:

Business Address [D&B] – The physical location of the firm, including street address, city, state, and ZIP Code elements

Employees Here [D&B] – Indicates the number of employees at this firm's location.

Employees Here Code (for Estimate or Range) [D&B] – A code that indicates whether the number of employees at this location is *real, estimated,* or *unknown.*

Import/Export Code [D&B] – Indicators whether the firm imports and/or exports.

Industry Cluster Membership [TNST] – Membership in one of TNST's distinct industry clusters, based on the firm's estimated telecommunications profile. This is a proprietary, intermediate step in the modeling process, and these cluster definitions and assignments are not released outside of TNST.

Legal Status [D&B] – Indicates whether the business entity is a *proprietorship, partnership,* or a *corporation.*

Manufacturing Indicator [D&B] – indicates whether any manufacturing occurs on-site.

Population Code [D&B] – An indicator for the size range of the surrounding population.

Primary SIC Code (4 digit) [D&B] – the primary Industry Classification Code associated with the firm at the immediate location.

State [D&B] – the U.S. State in which the firm is located (from the *Business Address* data, above).

Status Indicator [D&B] – indicates whether a firm is a *single business, headquarters,* or a *branch office* location.

Subsidiary Indicator [D&B] – indicates whether firm is a *subsidiary* of a larger company.

Telephone Number [D&B] – indicated the main telephone number of the firm, including information on the NPA/NXX (Area Code/Exchange)

Year Started [D&B] – indicates when the firm started doing business.

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