

## Branching Out (Instructor Version)

**Instructor Note:** Red font color or Gray highlights indicate text that appears in the instructor copy only.

### Objective

Describe WAN access technologies available to small-to-medium-sized business networks.

**Instructor Note:**

- This activity is can be completed individually or in small groups – it can then be shared and discussed with another group of students, with the entire class, or with the instructor.
- At this point of the curriculum, students should learn that there are different types of network equipment more suited for sizes of networks rather than which specific models of equipment should be considered for purchase.

### Scenario

Your medium-sized company is opening a new branch office to serve a wider, client-based network. This branch will focus on regular, day-to-day network operations, but will also provide TelePresence, web conferencing, IP telephony, video on demand, and wireless services.

Although you know that an ISP can provide WAN routers and switches to accommodate the branch office connectivity for the network, you prefer to use your own customer premises equipment (CPE). To ensure interoperability, Cisco devices have been used in all other branch-office WANs.

As the branch-office network administrator, it is your responsibility to research possible network devices for purchase and use over the WAN.

### Resources

- World Wide Web
- Word processing software

### Directions

**Step 1:** Visit the [Cisco Branch-WAN Business Calculator site](#). Accept the agreement to use the calculator.

**Step 2:** Input information to help the calculator determine a preferred router or ISR option for your branch and WAN (both).

**Note:** There is a slider tool within the calculator window that allows the choice of more service options for your branch office and WAN.

**Step 3:** The calculator will suggest a possible router or ISR device solution for your branch office and WAN. Use the tabs at the top of the calculator window to view the output.

**Step 4:** Create a matrix with three column headings and list some information provided by the output in each category:

- Return on investment (ROI)
- Total cost of ownership (TCO)
- Energy savings

**Step 5: Discuss your research with a classmate, group, class, or your instructor. Include in your discussion:**

- Specifics on the requirements of your network as used for calculator input
- Output information from your matrix
- Additional factors you would consider before purchasing a router or ISR for your new branch office

### Suggested Activity Example Solution:

**Instructor Notes:** (information will vary for each group depending on calculator information specified)

Suggested routers or ISRs for the branch and WAN office: \_\_\_\_\_

Return on Investment	Total Cost of Ownership	Energy Savings
(output notes will vary per group depending on WAN considerations and services specified)		

**Identify elements of the model that map to IT-related content:**

- WAN locations and sizes
- Devices used on the WAN
- Cost of ownership for WAN CPE devices
- WAN energy savings (green technology)