

METRON TECHNOLOGY N V
Form S-3
September 22, 2003

[QuickLinks](#) -- Click here to rapidly navigate through this document

As filed with the Securities and Exchange Commission on September 22, 2003

Registration No. 333-

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-3

REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

METRON TECHNOLOGY N.V.

(Exact name of registrant as specified in its charter)

The Netherlands
(State or Other Jurisdiction of Incorporation)

98-0180010
(I.R.S. Employer Identification No.)

**4425 Fortran Drive
San Jose, California 95134
(408) 719-4600**

(Address, including zip code, and telephone number, including area code of Registrant's principal executive offices)

**Edward D. Segal
Chief Executive Officer
Metron Technology N.V.
4425 Fortran Drive
San Jose, California 95134
(408) 719-4600**

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copy to:

**Suzanne Sawochka Hooper, Esq.
Cooley Godward LLP
Five Palo Alto Square
3000 El Camino Real
Palo Alto, CA 94306
(650) 843-5000**

**Approximate date of commencement of proposed sale to the public:
From time to time after the effective date of this after this Registration Statement.**

If the only securities being registered on this form are being offered pursuant to dividend or interest reinvestment plans, please check the following box.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box.

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

Edgar Filing: METRON TECHNOLOGY N V - Form S-3

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

If delivery of the prospectus is expected to be made pursuant to Rule 434, please check the following box. o

CALCULATION OF REGISTRATION FEE

| Title of Class of Securities to be Registered | Amount to be Registered(1) | Proposed Maximum Offering Price per Share(2) | Proposed Maximum Aggregate Offering Price | Amount of Registration Fee |
|---|----------------------------|--|---|----------------------------|
| Common Shares, par value EUR 0.44 per share | 4,785,673 | \$4.13 | \$19,764,829.49 | \$1,598.97 |

- (1) Includes (i) up to 1,217,396 of the registrant's common shares issuable upon exercise of warrants issued to the selling securityholders listed under the heading "Selling Securityholders" in the accompanying prospectus (the "Selling Securityholders"), on August 25, 2003, (ii) up to 2,770,447 of the registrant's common shares issuable upon conversion of \$7,000,000 aggregate principal amount of 8% Convertible Debentures (the "Debentures") of the registrant issued to the Selling Securityholders on August 25, 2003 and (iii) up to 747,519 of the registrant's common shares issuable in lieu of the cash payment of interest on the Debentures. Pursuant to Rule 416(a) of the Securities Act of 1933, as amended, this registration statement also registers such additional shares of the registrant's common shares as may become issuable to prevent dilution as a result of share splits, share dividends or similar transactions.
- (2) Estimated solely for the purpose of calculating the amount of the registration fee pursuant to Rule 457(c) of the Securities Act of 1933. The price per share and aggregate offering price are based upon the average of the high and low sales price of Metron Technology N.V.'s common shares on September 15, 2003 as reported on the Nasdaq National Market. It is not known how many shares will be purchased under this registration statement or at what price such shares will be purchased.

The registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

Subject To Completion, Dated September 22, 2003

The information in this prospectus is not complete may be changed. The selling securityholders named in this prospectus may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and the selling stockholders named in this prospectus are not soliciting offers to buy these securities in any state where an offer or sale of these securities is not permitted.

PROSPECTUS

4,785,673

METRON TECHNOLOGY N.V.

Common Shares

This prospectus relates to the resale, from time to time, of up to 4,785,673 common shares of Metron Technology N.V. by the Selling Securityholders identified in this prospectus. We will not receive any of the proceeds from the sale of common shares by the Selling Securityholders.

Edgar Filing: METRON TECHNOLOGY N V - Form S-3

Our common shares are listed on the Nasdaq National Market under the symbol MTCH. The closing sale price of the common shares, as reported on the Nasdaq National Market on September 19, 2003, was \$4.57 per share.

Investing in our common shares involves a high degree of risk. Please carefully consider the "Risk Factors" beginning on page 1 of this prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is _____, 2003.

TABLE OF CONTENTS

| | Page |
|-------------------------------------|-------------|
| METRON TECHNOLOGY N.V. | 1 |
| USE OF PROCEEDS | 1 |
| RISK FACTORS | 1 |
| WHERE YOU CAN FIND MORE INFORMATION | 13 |
| FORWARD-LOOKING STATEMENTS | 13 |
| SELLING SECURITYHOLDERS | 14 |
| PLAN OF DISTRIBUTION | 19 |
| LEGAL MATTERS | 20 |
| EXPERTS | 20 |
| INDEMNIFICATION OF NAMED EXPERT | 20 |

This prospectus is part of a registration statement we filed with the Securities and Exchange Commission. You should rely only on the information contained in or incorporated by reference in this prospectus. The SEC allows us to incorporate by reference information that we file with them, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus, and information that we file later with the SEC will automatically update and supersede this information.

i

METRON TECHNOLOGY N.V.

Metron Technology N.V., or Metron, is a holding company organized under the laws of The Netherlands in 1975. We are a leading global provider of outsource solutions to the semiconductor industry. Metron is focused on delivering outsourcing alternatives to semiconductor equipment and materials suppliers, semiconductor manufacturers and original equipment manufacturers.

Our executive offices are located at 4425 Fortran Drive, San Jose, California 95134. Our telephone number is (408) 719-4600.

USE OF PROCEEDS

We will not receive any proceeds from the sale of the common shares offered by the Selling Securityholders.

RISK FACTORS

Our business faces significant risks. These risks include those described below and may include additional risks and uncertainties not presently known to us or that we currently believe are immaterial. If any of the events or circumstances described in the following risks occurs, our business, operating results or financial condition could be materially adversely affected. These risks should be read in conjunction with the

other information set forth in our Annual Report on Form 10-K for the fiscal year ended May 31, 2003.

Risks related to Metron.

We may not be able to meet certain covenants in or renew certain credit facilities.

As of May 31, 2003, we had \$13.1 million of short-term borrowings under our various lines of credit. Certain of our credit facilities contain financial covenants that require us to meet and maintain certain financial tests. At May 31, 2003, we were in violation of covenants under our Compass Bank facility, for which we obtained a waiver. In August 2003, Compass Bank agreed to extend the facility with a reduced availability of \$4.0 million through mid-November 2003. As part of this extension, Compass Bank modified the covenants of which we were in violation, and we made a payment of \$3.0 million to Compass Bank from the proceeds of our August 2003 issuance of \$7.0 million principal amount of convertible debentures due 2007. Unless Compass Bank agrees to a further extension of the facility, the outstanding balance of the facility must be repaid in mid-November 2003. We intend to pursue discussions with alternative lenders to replace the Compass Bank facility prior to mid-November 2003. However, we cannot assure you that the Compass Bank facility or an alternative credit facility will be available to us after mid-November 2003 on favorable terms, or at all.

We intend to pursue discussions with our lenders to further waive, modify or, possibly, eliminate, certain financial covenants in our credit facilities and to pursue discussions with additional lenders that may not require such financial covenants. However, we cannot give any assurance that the lenders will agree to modify or eliminate such covenants, that we can comply with the covenants of our existing credit facilities or that we will be able to enter into arrangements with additional or alternative lenders that do not require such covenants. A breach of a covenant in a credit facility could result in the lender demanding repayment of all or part of our indebtedness, could impair our ability to obtain additional access to our current or alternate credit facilities and could result in a cross-default under our convertible debentures.

All of our lines of credit are payable on demand or subject to periodic, generally annual, review. Given recent developments in our business and industry, we cannot give any assurance that our lenders will agree to continue to make our credit facilities available to us, or that new lenders will agree to make credit facilities available to us, on terms or in amounts acceptable to us, or at all.

1

Any failure to retain our existing credit facilities or enter into replacement facilities may impair our ability to fund our current operations and achieve our longer-term business objectives. If our significant credit facility lenders demand repayment of all or a significant portion of our indebtedness after the end of fiscal 2004, we may not have the cash resources necessary to repay such indebtedness when due.

We may need to raise additional capital, and any inability to raise required funds could harm our business.

As of May 31, 2003, we had \$12.2 million of cash and cash equivalents and \$13.1 million of short-term borrowings under our various lines of credit. We incurred net losses of \$26.7 million and \$2.8 million for the years ended May 31, 2003 and 2002, respectively. We believe that our available cash resources, which comprise cash and cash equivalents (including the net proceeds from our August 2003 issuance of \$7.0 million of convertible debentures due 2007), amounts available under our credit facilities (giving effect to the July 2003 renewal of the \$3.8 million Royal Bank of Scotland facility and the August 2003 reduction in availability under the Compass Bank facility to \$4.0 million) and anticipated cash from operations, will be sufficient to meet our anticipated cash requirements through fiscal 2004. However, if our revenues are lower or our expenses are higher than anticipated, or if inventory, accounts receivable or other assets require a greater use of cash than anticipated, our available cash resources, including amounts available under our credit facilities, may not be sufficient for our cash requirements. Further, existing and potential customers and vendors may take actions that could harm our liquidity position if they believe that our cash balances are not adequate. In addition, if revenues increase materially, we may need to raise additional cash resources from external sources to permit us to conduct our operations in the ordinary course of business through fiscal 2004. We also intend to seek additional financing during fiscal 2004 to meet our anticipated cash requirements for fiscal 2005 and beyond.

We cannot give any assurance that financing will be available when needed on terms acceptable to us, or at all. If we determine that we need to issue additional equity securities or debt securities convertible into equity to address our need for cash resources, the issuance of additional equity securities or debt securities convertible into equity is likely to result in significant dilution to our existing shareholders, and the new equity securities or debt securities may have rights, preferences and privileges that are senior to those of our existing common shares. It may be necessary to raise additional funds through strategic transactions, in which event we may cease conducting or relinquish rights to a portion of our current business. Strategic transactions may not be available on terms that are favorable to us from a longer-term perspective.

In addition to our intent to raise capital to fund our operations, we may need to raise additional capital through public or private sales of equity and/or additional borrowings for significant acquisitions, significant capital expenditures or other extraordinary transactions. If we cannot

raise additional funds, if needed, on acceptable terms, we may not be able to develop our business, take advantage of future opportunities or respond to competitive pressures or unanticipated requirements, all of which could seriously harm our business and results of operations.

Our forecast of the period of time through which our financial resources are expected to be adequate to support our operations is a forward-looking statement. This statement involves known and unknown risks, uncertainties, and other factors that may cause our, or our industry's, actual results, levels of activity, performance or achievements to be materially different from any future results, levels of activity, performance or achievements expressed or implied by the forward-looking statements. These factors are discussed in these "Risks Related to Metron" and in our Form 10-K for the fiscal year ended May 31, 2003.

2

We are dependent on a few key suppliers for a majority of our revenue; therefore, the loss of or change in our relationship with one or more of our key suppliers could seriously harm our business.

If, for any reason, any of our key suppliers were to materially reduce its business or terminate its relationship with us, the loss of the key principal would have a material adverse effect on our business. In each of our last three fiscal years, a majority of our revenue came from the sale of products from five or fewer of our suppliers, which is how we refer to the semiconductor materials and equipment companies we represent. Although the suppliers that comprise our largest sources of revenue may change from period to period, we expect that revenue from the sale of products of a relatively small number of suppliers will continue to account for a substantial portion of our revenue for at least the next five years.

All of the semiconductor materials, equipment and products we market, sell, service and support are sold pursuant to agreements with our suppliers. These agreements are generally cancelable at will, subject to notification periods that range from 30 days to two years. We generally do not sell competing products in the same market, and, therefore, the number of suppliers we can represent at any one time is limited. It is likely that in the future some of our suppliers will terminate their relationships with us upon relatively short notice. If we lose a key principal, we may not be able to find a replacement quickly, or at all. The loss of a key principal may cause us to lose customers and incur expenses associated with ending our agreement with that principal. We may lose suppliers for various reasons, including:

mergers and acquisitions involving our suppliers and other semiconductor materials and equipment manufacturers that we do not represent;

a principal's decision to attempt to build a direct sales organization;

the expansion of a principal's product offerings to compete with the products of another principal, because we generally do not offer competing product lines;

a principal's dissatisfaction with our level or quality of service; and

the failure of a principal's business.

We have lost suppliers in the past. For example, in March 1999, A.G. Associates was acquired by Steag. As a result of this acquisition, we ceased marketing and selling A.G. Associates' products in September 1999. In July 1999, FSI sold its chemical management division to BOC Edwards. As a result of this divestiture, we no longer market and sell these products. In October 1999, Applied Materials acquired Obsidian. As a result of the acquisition, Obsidian terminated its agreement with us. In January 2001, we entered into an agreement with Entegris, Inc. to modify our existing distribution relationship, whereby Entegris assumed direct sales responsibility for products from its Microelectronics Group in Europe beginning April 1, 2001, and in Asia beginning May 1, 2001. In May 2002, by mutual agreement, we terminated our distributor agreement with August Technology, except in Korea. In August 2002, Cabot Microelectronics advised us of its decision to assume the direct distribution of its products in Europe and Singapore; the effective date of the transition was June 1, 2003. In October 2002, FSI advised us of its decision to assume the direct distribution of its products in Europe (except Israel) and Asia; the effective date of the transition was March 1, 2003. Our world-wide revenue for FSI products for the year ended May 31, 2001 was 24.5% of revenues. Our revenues for FSI products and services in Europe and Asia were approximately \$29.0 million and \$26.9 million (12.5% and 11.4% of revenue) for the years ended May 31, 2002 and 2003, respectively.

The semiconductor industry is highly cyclical, and during its periodic downturns, our operating results will deteriorate.

The semiconductor industry is highly cyclical and historically has experienced periodic downturns, which often have resulted in decreased expenditures by semiconductor manufacturers. These downturns

3

generally have adversely affected the sales, gross profits and operating results of semiconductor materials and equipment suppliers. Our business depends in large part on the procurement expenditures of semiconductor manufacturers, which, in turn, depend on the current and anticipated demand for semiconductors and products utilizing semiconductors. The downturn in the semiconductor industry from mid-1996 until the end of 1998 had a material adverse effect on our operating results. In February 2001, we started to experience a downturn in new orders, as well as delays in shipment for existing orders. The continuation of the downturn for any extended period, or an increase in the number of shipment delays, would have a materially adverse effect on our operating results.

We may not be able to successfully implement our restructuring efforts, and such efforts may adversely impact our ability to retain and attract future employees.

In October 2002, we announced that we would be reducing our workforce by approximately 125 employees worldwide. The total number of employees terminated as of May 31, 2003 was 125 people. On March 1, 2003, we transferred 93 employees to FSI. In addition, during our fourth quarter of fiscal 2003, we abandoned unutilised leased facilities as part of our restructuring. Workforce reductions, including the one we announced in fiscal 2003, could result in a temporary lack of focus and reduced productivity by our remaining employees, which in turn may affect our revenues in the current or a future quarter. In addition, prospects and current customers may decide to delay or not purchase our products due to the perceived uncertainty caused by our reduction in force. We cannot assure you that we will not reduce or otherwise adjust our workforce again in the future or that the related transition issues associated with such a reduction will not occur again. Further, we believe that our future success will depend in large part upon our ability to attract and retain highly-skilled personnel. We may have difficulty attracting such personnel as a result of a perceived risk of future workforce reductions.

If we are unable to successfully identify new products and enter into and implement arrangements with the suppliers of these products, our business will be seriously harmed.

To the extent we are unable to enter into relationships with suppliers who anticipate or respond adequately to technological developments or customer requirements, we could suffer a loss of competitiveness. Such loss, or any significant delays in product development or introductions by these suppliers, could have a materially adverse effect on our business. The semiconductor materials and equipment market is subject to rapid technological change, changing customer requirements and frequent new product introductions. Because of this, the life cycle of products that we market and sell is difficult to determine. Our future success will depend to a significant extent on our suppliers' ability to keep pace with changes in the market and, particularly because we generally do not carry competing product lines, on our ability to identify and obtain new product lines which achieve market success.

We face intense competition from companies with significantly greater financial, technical and marketing resources, which could adversely affect our ability to maintain or increase sales.

We face intense competition on two distinct fronts: competition for product lines and competition for customers.

If we are unable to compete successfully for product lines against independent sales and distribution companies that have greater financial resources, are more established or have longer-standing relationships with semiconductor materials and equipment manufacturers, we will be unable to offer competitive products, which will negatively impact our sales.

We compete with independent sales and distribution companies for the right to sell specific product lines in specific territories. We believe that our most formidable competition comes from regionally established semiconductor materials and equipment distribution companies. Some of these independent sales and distribution companies have substantially greater financial resources to devote to

4

a particular region than we do, are better established in particular regions than we are, have greater name recognition in their chosen markets than we have and have long-standing collaborative business relationships with semiconductor materials and equipment manufacturers which are difficult to overcome. If we are unable to effectively compete with sales and distribution companies to attract and retain suppliers, our business will be adversely affected.

If we are unable to compete for customers owing to our inability to provide sales, marketing and support services or particular product offerings, our ability to maintain or increase sales will be adversely affected.

We compete for orders from semiconductor manufacturers with established semiconductor materials and equipment manufacturers who sell directly to customers and with independent sales and distribution companies and sales representatives. We believe that to compete effectively for customers we must maintain a high level of investment in marketing, customer service and support in all of the markets in which we operate, and we may not have sufficient financial resources, technical expertise or marketing, services and support capabilities to continue to compete successfully in the future. Some of our competitors have greater name recognition in the territories they serve and have long-standing relationships with semiconductor manufacturers that may give them an advantage in attracting and retaining customers. Furthermore, we believe that once a semiconductor manufacturer has selected a particular product for a specific use from a vendor that is not one of our suppliers, it may be difficult to achieve significant sales of a competing product to that customer unless there are compelling reasons for the customer to switch products, such as significant performance or cost advantages.

We anticipate that as we continue to diversify our product portfolio and expand into new markets for our suppliers' products, we will encounter additional competition for customers. If we cannot continue to compete successfully for customers in the future, any such lack of success will have a significant negative impact on our business.

The management information systems that we currently use in our day-to-day operations are not integrated across the globe and some of them need to be upgraded. Upgrading them will be costly, and if the new system is not successfully implemented, our business may suffer material adverse consequences.

While our financial reporting management information system is integrated and operational, the current management information systems that we use to control our day-to-day operations are not integrated across the globe. To accommodate growth in the past, we have had to hire additional people to compensate for the lack of a fully-functional, integrated operations management information system. We are currently investing in a new operations management information system in order to maintain our current level of business and accommodate any future growth. We commenced implementation of the new system in Europe in 2001 and 2002. We plan to implement the financial management reporting system to support the centralization of our European operations into an entity called Metron Europa by our third quarter of fiscal 2004, and to commence the implementation in Asia with the next installation scheduled for Singapore after implementation in Metron Europa has been completed. We currently anticipate that the total costs associated with the implementation of the new system will be approximately \$12.0 to \$15.0 million and that the system will be fully implemented over the next 24 months. Any failure to successfully implement our new operations management information system may result in delayed growth, increased inefficiency due to a lack of centralized data, higher inventories, increased expenses associated with employing additional employees, a loss of our investment in the new operations management information system and may have additional material adverse effects on our business.

We need to successfully manage the anticipated expansion in our operations or our business may suffer material adverse consequences.

To the extent we are unable to effectively manage future expansion and the system and procedural transitions required by expansion, our business and our operating results could be seriously harmed. We have expanded our operations in the past and anticipate future expansion of our operations through acquisitions and otherwise. Our growth has placed and will continue to place significant demands on our management, operational, financial and technical resources, as well as our accounting and control systems, as we work to integrate geographically dispersed offices and administrative personnel, diverse service and maintenance operations and different accounting and financial systems. Our future operating results will depend on the ability of our management and other employees to:

implement and improve our operational, customer support and financial control systems;

recruit, train, manage and motivate our employees;

identify companies that are strategic acquisition candidates and successfully acquire and integrate them with our existing business;

communicate information efficiently throughout our organization; and

work effectively with suppliers and customers.

We cannot predict whether these efforts will be successful or will occur in a timely or efficient manner. We may not be able to install adequate control systems in an efficient and timely manner, and our current or planned operational systems, procedures and controls may not be adequate to support our future operations. The difficulties associated with installing and implementing new systems, procedures and controls may place a significant burden on our management and our internal resources. Delays in the implementation of new systems or operational disruptions when we transition to new systems would impair our ability to accurately forecast sales demand, manage our product inventory and record and report financial and management information on a timely and accurate basis.

Our indebtedness and debt service obligations may adversely affect our cash flow and ability to obtain additional financing.

Our annual debt service obligations on our 8% convertible debentures due 2007 are approximately \$0.6 million per year in interest payments. Our indebtedness could have significant negative consequences, including: requiring the dedication of a portion of our expected cash flow from operations to service our indebtedness if we do not make interest payments in our common shares rather than cash, thereby reducing the amount of our expected cash flow available for other purposes, including capital expenditures; increasing our vulnerability to general adverse economic and industry conditions; limiting our ability to obtain additional financing; limiting our flexibility in planning for, or reacting to, changes in our business and the industry in which we compete; and placing us at a possible competitive disadvantage to less leveraged competitors and competitors that have better access to capital resources. The existence of debt service obligations and the anti-dilution provisions of our debentures also may limit our ability to obtain additional financing on terms favorable to us.

We may not be successful in our effort to penetrate Japan, which could limit our future growth.

On April 8, 2003, we announced the opening of Metron Technology (Japan) K.K. ("Metron Japan") in Yokohama, Japan. Approximately 22% of the world's production of semiconductors in 2002 took place in Japan. Accordingly, to reach all of the world's major semiconductor markets, we will need to be successful in our efforts to establish or acquire sales, marketing and/or service capabilities in Japan. Historically, it has been difficult for non-Japanese companies to succeed in establishing themselves in Japan. We intend Metron Japan to serve as our headquarters for building partnerships with original equipment manufacturers (OEMs) in Japan and to provide service and outsource

solutions in the local market. We cannot predict whether our efforts to penetrate the Japanese market will be successful. If we are not successful in our efforts to penetrate the Japanese market, our future growth may be limited.

We expect continued downward pressure on the gross margins of the products we sell, and as a result, if we are unable to continue to decrease our operating expenses as a percentage of sales or find replacement product lines with higher gross margins, we will be unable to increase or maintain our operating margins.

Particularly during industry down cycles, pressure on the gross margins of the products we sell is intense and can adversely impact our financial performance. We have experienced significant downward pressure on our gross margins, mainly as a result of sales discounts offered by our competitors and pressure from our customers to reduce prices and from our suppliers to reduce the discounts they provide to us. This, in turn, has put significant downward pressure on our operating margins. To maintain or increase our gross margins, we must develop and maintain relationships with suppliers who introduce new products and product enhancements on a timely basis. As a result of continued pressure on gross margins, we must find ways to decrease our selling, general, administrative and other expenses as a percentage of sales to increase or maintain our operating margins. If our suppliers cannot continue to innovate, if we cannot maintain our relationships with innovating suppliers, if we cannot otherwise identify product lines with higher gross margins or if we cannot successfully manage our selling, general, administrative and other expenses, our operating margins may decrease. If our operating margins decline as a result of these factors, our business would be harmed.

Our employment costs in the short-term are to a large extent fixed, and therefore any cyclical revenue shortfall could adversely affect our operating results.

Our operating expense levels are based in significant part on our head count, which is generally driven by longer-term revenue goals. For a variety of reasons, particularly the high cost and disruption of lay-offs and the costs of recruiting and training, our head count in the short-term is, to a large extent, fixed. In addition, approximately half of our employees are in Europe, and the costs associated with any reductions of our labor force in Europe are high. As a result of these factors, we were unable to reduce employment costs in a timely manner to compensate for the cyclical revenue or gross margin shortfall we have suffered during the current downturn, which has had a material adverse effect on our operating results. We cannot assure you that we will be able to reduce employment costs sufficiently to compensate for future cyclical revenue shortfall.

We may bear inventory risk due to an inability to return products, and if we are unable to manage our inventory effectively, our operating results could be adversely affected.

We bear inventory risk because we generally take title to the products we sell when we receive them from our suppliers, and we cannot always return products to the principal in the event the products are not sold. Our customers do not always purchase at the time or in the quantities we originally anticipated. For example, as a result of the current industry downturn beginning in fiscal 2001, we had excess inventory for which we booked reserves in Europe, the United States and Asia. Typically, products cannot be returned to suppliers after they have been in our inventory for a certain period of time; this time period varies depending on the product and the principal. In addition, although it is typical when a relationship with a principal terminates for that principal to repurchase most of the inventory we have of that principal's products, it is possible under certain circumstances that a principal may be unable or unwilling to repurchase our inventory. If we fail to manage our inventory and accumulate substantial product that cannot be returned, our operating results could be adversely affected. Furthermore, if a principal cannot provide refunds in cash for the inventory we desire to return, we may be forced to dispose of inventory below cost, and this may have a material adverse effect on our financial results.

Our revenue and operating results may fluctuate in future periods, which could adversely affect our share price.

In the past, we have experienced fluctuations in our quarterly and annual operating results and anticipate that these fluctuations will continue in the future due to a variety of factors, many of which are outside our control. Fluctuations in our results could cause our share price to decline substantially. We believe that period-to-period comparisons of our results of operations may not be meaningful, and you should not rely upon them as indicators of our future performance. Our sales in, and the operating results for, a particular quarter can vary significantly due to a variety of factors, including those described elsewhere in our Form 10-K for the fiscal year ended May 31, 2003 and the following:

The Timing Of Significant Customer Orders And Customer Spending Patterns. During industry downturns, our customers may ask us to delay or even cancel the shipment of previously firm orders. Delays and cancellations may adversely affect our operating results in any particular quarter if we are unable to recognize revenue for particular sales in the quarter in which those sales were expected.

The Timing Of Product Shipments By Our Suppliers. For the most part, we recognize sales upon the shipment of goods to our customers. Most of the equipment and some of the materials we sell are shipped by the principal directly to our customers, and we do not necessarily have any control over the timing of a particular shipment. If we are unable to recognize revenue for a particular sale in the quarter in which that sale was expected, our operating results in that particular quarter will be negatively affected.

The Timing Of New Product And Service Announcements By Our Suppliers And Their Competitors. New product announcements by our suppliers and their competitors could cause our customers to delay a purchase or to decide to purchase products of one of our principal's competitors which would adversely affect our revenue and, therefore, our results of operations. New product announcements by others may make it necessary for us to reduce prices on our products or offer more service options, which could adversely impact operating margins and net income.

The Mix Of Products Sold And The Market Acceptance Of Our New Product Lines. The mix of products we sell varies from period to period, and because margins vary amongst and/or within different product lines, this can adversely affect our results of operations. If we fail to sell our products that generate higher margins, our average gross margins may be lower than expected. If we fail to sell our new product lines, our revenue may be lower than expected.

General Global Economic Conditions Or Economic Conditions In A Particular Region. When economic conditions in a region or worldwide worsen, customers may delay or cancel their orders. There may also be an increase in the time it takes to collect from our customers or even outright defaults in payments. This can negatively affect our cash flow and our results.

Costs We May Incur If We Become Involved In Future Litigation. Litigation is often costly, and even if we are successful in defending or making any claim, the expenses incurred may significantly impact our results.

Charges to Earnings for Other Long Lived Assets. As a result of our market capitalization being less than our shareholders' equity, we may be required to recognize an impairment charge in connection with the carrying value of our long-lived assets. This could negatively impact our results.

As a result of the factors listed above, our future operating results are difficult to predict. Further, we base our current and future expense plans in significant part on our expectations of our longer-term future revenue. As a result, we expect our expense levels to be relatively fixed in the short-run. A decline in revenue for a particular quarter may disproportionately affect our net income in that quarter. If our revenue is below our projections, then our operating results will also be below expectations and,

8

as we have in the past, we may even have losses in the short-run. Any one of the factors listed above, or a combination thereof, could adversely affect our quarterly results of operations, and consequently may cause a decline in our share price.

We depend on sales to a relatively small number of customers for a significant portion of our revenue, and if any of our large customers were to stop or reduce their purchasing from us, this would materially and adversely affect our revenue.

A loss or a significant reduction or delay in sales to any of our major customers could materially and adversely affect our revenue. We depend on a small number of customers for a substantial portion of our revenue. In fiscal 2003, our top ten customers accounted for an aggregate of 42% of our sales. Although a ranking by revenue of our largest customers will vary from period to period, we expect that revenue from a relatively small number of customers will account for a substantial portion of our revenue in any accounting period for the foreseeable future. Consolidation in the semiconductor industry may result in increased customer concentration and the potential loss of customers as a result of acquisitions. Unless we diversify and expand our customer base, our future success will significantly depend upon certain factors which are not within our control, including:

the timing and size of future purchase orders, if any, from our larger customers;

the product requirements of our customers; and

the financial and operational success of our customers.

If any of our largest customers were to stop or reduce their purchasing from us, our financial results could be adversely affected. In October 2002, FSI advised us of its decision to assume the direct distribution of its products in Europe (except Israel) and Asia; the effective date of the transition was March 1, 2003. This transition will mean that we can no longer sell these FSI products to our customers in these regions, which could result in the loss of some customers. Our world-wide revenue for FSI products for the year ended May 31, 2001 was 24.5% of revenues. Our revenues for FSI products and services in Europe and Asia were approximately \$29.0 million and \$26.9 million (12.5% and 11.4% of revenue) for the years ended May 31, 2002 and 2003, respectively. A significant decrease in sales to a major customer or the deferral or cancellation of any significant order would have a material adverse effect on our operating results.

Our sales cycle, particularly for equipment, is long and unpredictable, which could require us to incur high sales and marketing expenses with no assurance that a sale will result.

Sales cycles for some of our products, particularly equipment, can run as long as 12 to 18 months. As a result, we may not recognize revenue from efforts to sell particular products for extended periods of time, or at all. We believe that the length of the sales cycle may increase

as some current and potential customers of our key suppliers centralize purchasing decisions into one decision-making entity. We expect this may intensify the evaluation process and require us to make additional sales and marketing expenditures with no assurance that a sale will result.

We have recently expanded our operations to include manufacturing, an activity with which we do not have significant experience. This new activity will require us to hire managers and employees with different skills from those of our existing employees and to develop systems to manage processes with which we have no prior experience.

We now manufacture, under license from the original equipment manufacturer, Varian sputtering (PVD) equipment, licensed from Novellus, and AG Associates rapid thermal processing (RTP) equipment, licensed from Mattson. Prior to our entry into what is commonly called the legacy equipment business, we did not manufacture any equipment. With our entry into this business, we have had to hire managers and other employees who have different skills from those of our existing

employees. We have also had to install new systems to keep track of manufacturing inventories. As a consequence of our lack of experience, our newly initiated manufacturing activity may incur unanticipated costs, and we may not realize the gross margins that we planned to in making the necessary investments. In May 2002, we acquired certain assets of Advanced Stainless Technologies (AST), a Texas-based manufacturer of electro-polished stainless steel tubes and fittings. We had no prior experience of operating a plant such as AST's, and we may incur unexpected costs in connection with AST's business.

We have not yet developed a strategy to sell to our customers over the Internet, and if a competitor develops and implements an effective e-commerce strategy, we may lose some of our customers, which would have a negative impact on our results of operations.

Although we have begun efforts to develop an e-commerce strategy, we have not implemented a process to sell to our customers over the Internet. Because our suppliers grant us the right to sell their products only for specific territories and sales conducted over the Internet may occur anywhere around the globe, it is difficult to adopt e-commerce practices in our industry. If our suppliers decide to directly distribute their products over the Internet, if our competitors develop a successful strategy for engaging in e-commerce or if our customers require e-commerce capabilities which we are unable to provide, we may lose customers, which would have a negative impact on our revenue and on our operating results.

Risks related to our international operations.

Economic difficulties in countries in which we sell our products can lead to a decrease in demand for our products and impair our financial results.

The volatility of general economic conditions and fluctuations in currency exchange and interest rates can lead to decreased demand in countries in which we sell products. For example, in 1997 and 1998 many Asian countries experienced economic and financial difficulties. During this period, we experienced cancellation or delay of orders for our products from customers in Asia, which adversely affected our results of operations. Moreover, any economic, banking or currency difficulties experienced by countries in which we have sales may lead to economic instability in those countries. This in turn may result in the cancellation or delay of orders for our products from customers in those countries, thus adversely affecting our results of operations.

Most of our product sales are outside the United States, and currency fluctuations may impair our financial results.

While most of our international sales are denominated in United States dollars, some are denominated in various foreign currencies. To the extent that our sales and operating expenses are denominated in foreign currencies, our operating results may be adversely affected by changes in exchange rates. For example, in the second quarter of fiscal 2002, we recorded exchange losses of approximately \$470,000. In fiscal 2003, approximately \$449,000 of the foreign exchange loss pertained to the cost of hedging the Israel Shekel. The higher cost was primarily due to the difference in the interest rates between the United States dollar and Israel Shekel. Given the number of currencies involved, the substantial volatility of currency exchange rates, and our constantly changing currency exposures, we cannot predict the effect of exchange rate fluctuations on our future operating results. Although we engage in foreign currency hedging transactions from time to time, these hedging transactions can be costly, and, therefore, we do not attempt to cover all potential foreign currency exposures. These hedging techniques do not eliminate all of the effects of foreign currency fluctuations on anticipated revenue.

Risks related to investing in our common shares.

We are significantly controlled by FSI and Entegris, which may limit your ability to influence the outcome of director elections and other shareholder matters.

As of May 31, 2003, FSI owned 16.8%, and Entegris owned 12.4% of our outstanding shares. By virtue of their share ownership, FSI and Entegris can exercise significant voting control over Metron. As a result, each of these shareholders has significant influence over all matters requiring shareholder approval, including the election of directors, which may have the effect of delaying or preventing a third party from acquiring control over us.

Our share price is volatile.

The trading price of our common shares is subject to wide fluctuations in response to various factors, some of which are beyond our control, including factors discussed in our Form 10-K for the fiscal year ended May 31, 2003 and the following:

failure to meet our publicly-stated expectations or the published expectations of securities analysts for a given quarterly period;

changes in financial estimates by securities analysts;

changes in market values of comparable companies;

stock market price and volume fluctuations, which are particularly common among securities of high technology companies;

stock market price and volume fluctuations attributable to inconsistent trading volume levels;

additions or departures of key personnel; and

commencement of our involvement in litigation.

In the past, securities class action litigation has often been brought against a company following periods of volatility in the market price of its securities. We may in the future be the target of similar litigation. Securities litigation may result in substantial costs and divert management's attention and resources, which may seriously harm our business.

Risks related to being a Dutch company.

Our Supervisory Board has the authority to issue shares without shareholder approval, which may make it more difficult for a third party to acquire us.

As a Netherlands "Naamloze Vennootschap," or N.V., we are subject to requirements not generally applicable to corporations organized in United States jurisdictions. Among other things, under Netherlands law, the issuance of shares of an N.V. must be approved by the shareholders unless the shareholders have delegated the authority to issue shares to another corporate body. Our articles of association provide that the shareholders have the authority to resolve to issue shares, common or preferred. The shareholders may designate the Company's Supervisory Board as the corporate body with the authority to adopt any resolution to issue shares, but this designation may not exceed a period of five years. Our articles also provide that as long as the Supervisory Board has the authority to adopt a resolution to issue shares, the shareholders will not have this authority. Pursuant to the Metron articles, the Supervisory Board has the authority to adopt resolutions to issue shares until five years from the November 19, 1999, deed of conversion from a B.V. to an N.V. and the related amendment of our articles of association. This authorization of the Supervisory Board may be renewed by the shareholders from time to time. As a result, our Supervisory Board currently has the authority to issue common and preferred shares without shareholder approval unless such approval is required under the terms of our Nasdaq listing agreement.

The issuance of preferred shares could have the effect of making it more difficult for a third party to acquire, or of discouraging a third party from acquiring, a majority of the outstanding shares of our share capital.

It may not be possible to enforce United States judgments against Netherlands corporations, directors and others.

Our articles provide that Metron has two separate boards of directors, a Managing Board and a Supervisory Board. A significant percentage of our assets are located outside the United States. Furthermore, judgments of United States courts, including judgments against us, our directors or our officers predicated on the civil liability provisions of the federal securities laws of the United States, are not directly enforceable in The Netherlands.

Provisions of our charter documents and Dutch law could discourage potential acquisition proposals and could delay, deter or prevent a change in control.

Our articles of association and the applicable law of The Netherlands contain provisions that may be deemed to have anti-takeover effects. These provisions may delay, defer or prevent a takeover attempt that a shareholder might consider in the best interest of our shareholders. For example, our articles may be amended only pursuant to a proposal of the Supervisory Board followed by a resolution of a general meeting of shareholders. To amend our articles requires that at a general meeting of shareholders, (1) more than half of the issued share capital is represented and (2) the resolution to amend the articles is supported by a two-thirds majority of the valid votes cast. This supermajority voting requirement may have the effect of discouraging a third party from acquiring a majority of the outstanding Metron shares. In addition, these provisions could have a negative impact on our share price. Furthermore, some United States tax laws may discourage third parties from accumulating significant blocks of our common shares.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy these reports, proxy statements and other information at the SEC's public reference rooms at 450 Fifth Street, N.W., Washington, D.C. 20549. You can request copies of these documents by writing to the SEC and paying a fee for the copying cost. Please call the SEC at 1-800-SEC-0330 for more information about the operation of the public reference rooms. Our SEC filings are also available at the SEC's Web site at <http://www.sec.gov>.

We incorporate by reference the documents listed below, except as modified by this registration statement, and any future filings we make with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934:

Annual Report on Form 10-K for the year ended May 31, 2003 (File No. 0-27863), filed with the SEC on August 29, 2003 and amended by Form 10-K/A filed with the SEC on September 19, 2003;

Current Report on Form 8-K (File No. 0-27863), filed with the SEC on August 27, 2003; and

The description of our common shares contained under the heading "Description of Capital Shares" in Amendment No. 4 to our Form S-1 (File No. 333- 87665), filed with the SEC on November 17, 1999.

We will furnish without charge to you, upon written or oral request, a copy of any or all of the documents described above, except for exhibits, unless the exhibits are specifically incorporated by reference into the documents. You should direct your requests to:

Metron Technology N.V.
4425 Fortran Drive
San Jose, California 95134
(408) 719-4600

Attention: Chief Financial Officer

FORWARD-LOOKING STATEMENTS

Some of the statements contained in this prospectus or incorporated by reference are "forward-looking statements." These statements involve known and unknown risks, uncertainties and other factors that may cause our, or our industry's, actual results, levels of activity, performance or achievements to be materially different from any future results, levels of activity, performance or achievements expressed or implied by the forward-looking statements, including the factors described under the heading "Risk Factors" and elsewhere in this prospectus.

In some cases, you can identify forward-looking statements by terminology such as "expects," "anticipates," "intends," "may," "should," "plans," "believes," "seeks," "estimates," "could," "would" or the negative of such terms or other comparable terminology.

Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements. Moreover, neither we nor any other person assumes responsibility for the accuracy and completeness of these statements. We do not assume any obligation to publicly release the results of any revision or updates to these forward-looking statements to reflect future events or unanticipated occurrences, except to the extent required by federal securities laws.

13

SELLING SECURITYHOLDERS

Summary

Set forth below is a summary of the transaction pursuant to which we issued the Warrants and Debentures to the Selling Securityholders, as well as the principal terms of the Warrants and Debentures and our relationship with the Selling Securityholders.

Private Placement

On August 25, 2003, we completed the sale of \$7.0 million aggregate principal amount of 8% Convertible Debentures (the "Debentures") and warrants to purchase up to 811,594 of our common shares (the "Warrants"), to the Selling Securityholders pursuant to Section 4(2) of the Securities Act and Rule 506 promulgated thereunder (the "Financing"). We received gross proceeds of approximately \$7.0 million from the Financing, \$3.0 million of which was used to repay short-term indebtedness, with the remainder expected to be used for working capital. The following investors purchased the Debentures and the Warrants: Midsummer Investment, Ltd., Omicron Master Trust, Islandia, L.P., Enable Growth Partners, L.P, J. M. Hull Associates, L.P. and S.F. Capital Partners Ltd.

The Debentures and the Warrants were issued pursuant to the Subscription Agreement dated as of August 25, 2003 between us and the investors that purchased the Debentures and the Warrants. The Debentures mature on February 25, 2007, bear interest at the rate of 8% per annum and are convertible into 1,846,964 of our common shares at a per share conversion price of \$3.79. The conversion price of the Debentures is subject to limited anti-dilution adjustments under certain circumstances. We are entitled to issue common shares in lieu of the cash payment of interest on the Debentures, subject to certain limitations. We also are entitled to force conversion of the Debentures into common shares in the event our common share price exceeds \$10.34 per share for 20 consecutive trading days, provided certain conditions are met. Generally, these conditions are that:

1. Metron has duly honored all conversions occurring prior to the date the holders of the Debentures receive notice of the forced conversion;
2. there is an effective registration statement (and Metron believes, in good faith, that such effectiveness will continue uninterrupted for the foreseeable future) for all of the common shares issued or issuable pursuant the Debentures (the "Underlying Shares") or all the Underlying Shares can be sold immediately pursuant to Rule 144;
3. the common shares are listed for trading on a the Nasdaq National Market (and the Company believes, in good faith, that trading of the common shares on the Nasdaq National Market will continue uninterrupted for the foreseeable future);

4. all liquidated damages and other amounts owing in respect of the Debentures and Underlying Shares have been paid or will, concurrently with the issuance of the Underlying Shares, be paid in cash;
5. a sufficient number of common shares is reserved from Metron's authorized share capital to provide for the issuance of all the Underlying Shares subject to the forced conversion;
6. no event of default nor any event that with the passage of time would constitute an event of default under the Debentures has occurred and is continuing; and
7. the forced conversion would not result, when aggregated with all other prior issuances of common shares pursuant to the Warrants and the Debentures, in the issuance of more than 19.999% of the number of common shares outstanding immediately prior to the Financing, unless shareholder approval has been obtained for such issuance.

Each of the Warrants is immediately exercisable and is exercisable on or prior to the earlier of (i) the close of business on August 25, 2007 or (ii) 30 days after we give notice of mandatory termination, but not thereafter. We may give notice of mandatory termination of a warrant provided that (i) the common shares issuable upon conversion of the warrant are registered for resale pursuant to the Securities Act of 1933 or are freely tradable without restriction or legend and have been continuously for at least the 20-trading day period immediately preceding the date of the notice of termination, (ii) the common shares are listed or quoted for trading on the Nasdaq National Market continuously during the 20-trading day period immediately preceding the date of the notice of mandatory termination and (iii) the price of our common shares is equal to or greater than \$10.34 for each of the 20 trading days immediately preceding the date of notice of termination (subject to adjustment for reverse and forward stock splits, stock dividends, stock combinations and other similar transactions). Warrants to purchase up to 405,797 common shares are exercisable at a price per share of \$3.97, subject to adjustment, and Warrants to purchase up to 405,797 common shares are exercisable at a price per share of \$4.31, subject to adjustment.

We entered into the Registration Rights Agreement (the "Rights Agreement"), dated as of August 25, 2003, with the Selling Securityholders. Pursuant to the Rights Agreement, we agreed to file with the SEC on or before September 24, 2003 a registration statement covering the resale of 150% of the common shares issuable in connection with the Financing. Accordingly, we filed a Registration Statement on Form S-3, of which this prospectus forms a part, on September 19, 2003, with respect to the resale of these shares from time to time.

Our Relationships with the Selling Securityholders

Other than as set forth above, we have had no material relationship with any of the Selling Securityholders during the past three years.

Selling Securityholders

We have filed a registration statement with the SEC, of which this prospectus forms a part, with respect to the resale of our common shares covered by this prospectus from time to time. Our common shares being offered by this prospectus are being registered to permit secondary public trading of our common shares. Subject to the restrictions described in this prospectus, the Selling Securityholders may offer our common shares covered under this prospectus for resale from time to time. The common shares covered, as to their resale, under this prospectus include shares issuable upon conversion of the Debentures and exercise of the Warrants, including any additional shares issuable to prevent dilution as a result of stock splits, stock dividends or similar events. In addition, subject to the restrictions described in this prospectus, the Selling Securityholders may sell, transfer or otherwise dispose of a portion of our common shares being offered under this prospectus in transactions exempt from the registration requirements of the Securities Act. See "Plan of Distribution."

The table below presents information as of September 8, 2003 regarding the Selling Securityholders and the shares that the Selling Securityholders (and their pledgees, assignees and successors-in-interest) may offer and sell from time to time under this prospectus. The table is prepared based on information supplied to us by the Selling Securityholders. Although we have assumed for purposes of the table below that the Selling Securityholders will sell all of the shares offered by this prospectus, because the Selling Securityholders may offer from time to time all or some of their shares covered under this prospectus, or in another permitted manner, no assurances can be given as to the actual number of shares that will be resold by the Selling Securityholders or that will be held by the Selling Securityholders after completion of the resales. In addition, the Selling Securityholders may have sold, transferred or otherwise disposed of the Debentures or the Warrants in transactions exempt from the registration requirements of the Securities Act since the date the Selling Securityholders provided the information regarding their securities holdings. Information concerning the Selling

Securityholders may change from time to time and changed information will be presented in a supplement to this prospectus if and when necessary and required. There are currently no agreements, arrangements or understandings with respect to the resale of any of the shares covered by this prospectus.

The table below lists the Selling Securityholders and other information regarding the ownership of the common shares by each of the Selling Securityholders. The column titled "Number of Shares Being Offered" lists for each Selling Securityholder, the number of common shares, based on its ownership of the Debentures and/or Warrants that may be issuable to the Selling Securityholder upon conversion of the Debentures, payment of the interest on the Debentures in common shares (notwithstanding the fact that the we can elect to pay interest on the Debentures in cash) and exercise of the Warrants, without regard to any limitation on conversions, exercise or payments. Because payments of interest on the Debentures in common shares is based on a formula that takes into account the market price of our common shares, the numbers listed in the table below may fluctuate from time to time. We determined the number of common shares to be offered for resale by the Selling Securityholders under this prospectus by agreement with the Selling Securityholders under the terms of the Rights Agreement. In determining the number of shares to be offered, we assumed the following:

1. conversion of all of the outstanding Debentures;
2. all interest payments on the Debentures are made in our common shares and all of the Debentures are held until the 42nd month anniversary of their date of issuance
3. a conversion rate for the Debentures of \$3.79 per share and a conversion rate for the interest payments of \$4.40;
4. all shares issuable upon the exercise the Warrants are being offered, without regard to any limitations on conversions or exercise; and
5. the shares being offered are equal to 150% of the shares calculated in steps 1. through 4. above due to potential conversion price adjustments and the fluctuating stock price used to determine the number of common shares issuable in payment of interest on the Debentures.

The amounts and percentages under the headings "Deemed Ownership Prior to the Offering" and "Number of Shares Being Offered" reflect the shares issuable under conversion of the Debentures and exercise of the Warrants assuming the events in steps 1. through 5. above.

Under the terms of the Debentures and the Warrants (collectively, the "Securities"), no Selling Securityholder may receive shares in connection with the conversion of the Debentures or the exercise of the Warrants, to the extent such conversion or exercise would cause such Selling Securityholder, together with its affiliates, to beneficially own more than 4.99% (9.99% in the case of a forced conversion of the Debentures or mandatory termination of the Warrants) of our then outstanding common shares following such conversion or exercise, excluding for purposes of such determination common shares issuable upon conversion of the Debentures which have not been converted and upon exercise of the Warrants that have not been exercised. In addition, under the terms of the Securities, Metron may not issue pursuant to the Securities more than 19.999% of the number of common outstanding immediately prior to the Financing unless shareholder approval has been obtained for such issuance. The numbers in the table below do not reflect these limitations.

The applicable percentages of ownership are based on an aggregate of 12,609,078 shares of our common shares issued and outstanding on August 31, 2003.

| Name | Deemed Ownership Prior to Offering** | Number of Shares Being | Ownership After the Offering |
|------|---|---------------------------|---------------------------------|
|------|---|---------------------------|---------------------------------|

Edgar Filing: METRON TECHNOLOGY N V - Form S-3

| | Deemed Ownership Prior to Offering** | | Offered | Ownership After the Offering | |
|--|---|---------|-----------|---------------------------------|---------|
| | Number | Percent | | Number | Percent |
| | 2,027,556 | 13.9 | | 0 | 0.0% |
| Omicron Master Trust(2)(3) | 1,216,353 | 8.8% | 1,216,353 | 0 | 0.0% |
| Islandia, L.P.(4) | 173,914 | 5.1% | 173,914 | 0 | 0.0% |
| Midsummer Investment, Ltd.(1) | 67,575 | * | 67,575 | 0 | 0.0% |
| Enable Growth Partners, L.P.(5) | 67,575 | * | 67,575 | 0 | 0.0% |
| J. M. Hull Associates, L.P.(6) | 67,575 | * | 67,575 | 0 | 0.0% |
| S.F. Capital Partners Ltd.(7) | 675,753 | 5.1% | 675,753 | 0 | 0.0% |
| Any pledgees, assignees and successors-in-interest of the Selling Securityholders(8)(9) | | | | | |

*
Less than 1%

**
Deemed ownership prior to the offering is based on the formula as discussed above. Actual beneficial ownership is less.

(1)
Includes 521,740 common shares issuable upon exercise of the Warrants, 1,187,334 common shares issuable upon conversion of Debentures, and 318,182 common shares potentially issuable in lieu of cash payment of interest on the Debentures.

(2)
Includes 313,044 common shares issuable upon exercise of the Warrants, 712,401 common shares issuable upon conversion of Debentures, and 190,908 common shares potentially issuable in lieu of cash payment of interest on the Debentures.

(3)
Omicron Capital, L.P., a Delaware limited partnership ("Omicron Capital"), serves as investment manager to Omicron Master Trust, a trust formed under the laws of Bermuda ("Omicron"), Omicron Capital, Inc., a Delaware corporation ("OCI"), serves as general partner of Omicron Capital, and Winchester Global Trust Company Limited ("Winchester") serves as the trustee of Omicron. By reason of such relationships, Omicron Capital and OCI may be deemed to share dispositive power over the common shares owned by Omicron, and Winchester may be deemed to share voting and dispositive power over the common shares owned by Omicron. Omicron Capital, OCI and Winchester disclaim beneficial ownership of such common shares. Omicron Capital has delegated authority from the board of directors of Winchester regarding the portfolio management decisions with respect to the common shares owned by Omicron and, as of April 21, 2003, Mr. Olivier H. Morali and Mr. Bruce T. Bernstein, officers of OCI, have delegated authority from the board of directors of OCI regarding the portfolio management decisions of Omicron Capital with respect to the common shares owned by Omicron. By reason of such delegated authority, Messrs. Morali and Bernstein may be deemed to share dispositive power over the common shares owned by Omicron. Messrs. Morali and Bernstein disclaim beneficial ownership of such common shares and neither of such persons has any legal right to maintain such delegated authority. No other person has sole or shared voting or dispositive power with respect to the common shares being offered by Omicron, as those terms are used for purposes under Regulation 13D-G of the Securities Exchange Act of 1934, as amended. Omicron and Winchester are not "affiliates" of one another, as that term is used for purposes of the Securities Exchange Act of 1934, as amended, or of any other person named in this prospectus as a selling stockholder. No person or "group" (as that term is used in Section 13(d) of the Securities Exchange Act of 1934, as amended, or the SEC's Regulation 13D-G) controls Omicron and Winchester.

17

(4)
Includes 173,914 common shares issuable upon exercise of the Warrants, 395,778 common shares issuable upon conversion of Debentures, and 106,061 common shares potentially issuable in lieu of cash payment of interest on the Debentures.

(5)
Includes 17,392 common shares issuable upon exercise of the Warrants, 39,578 common shares issuable upon conversion of Debentures, and 10,605 common shares potentially issuable in lieu of cash payment of interest on the Debentures.

(6)
Includes 17,392 common shares issuable upon exercise of the Warrants, 39,578 common shares issuable upon conversion of Debentures, and 10,605 common shares potentially issuable in lieu of cash payment of interest on the Debentures.

- (7) Includes 173,914 common shares issuable upon exercise of the Warrants, 395,778 common shares issuable upon conversion of Debentures, and 106,061 common shares potentially issuable in lieu of cash payment of interest on the Debentures.
- (8) Information concerning other Selling Securityholders will be set forth in one or more prospectus supplements from time to time, if required.
- (9) Assumes that any pledgees, assignees and successors-in-interest do not beneficially own any common shares other than common shares issuable or issued upon conversion of the Debentures or exercise of the Warrants.

PLAN OF DISTRIBUTION

The Selling Securityholders or any of their permitted pledgees, donees, assignees and successors-in-interest may, from time to time, sell any or all of their common shares on any stock exchange, market or trading facility on which the shares are traded or in private transactions. These sales may be at fixed or negotiated prices. The Selling Securityholders may use any one or more of the following methods when selling shares:

ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;

block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;

purchases by a broker-dealer as principal and resale by the broker-dealer for its account;

an exchange distribution in accordance with the rules of the applicable exchange;

privately negotiated transactions;

settlement of short sales;

broker-dealers may agree with the Selling Securityholders to sell a specified number of such shares at a stipulated price per share;

combination of any such methods of sale; and

any other method permitted pursuant to applicable law.

The Selling Securityholders may also sell shares that qualify for sale pursuant to Rule 144 under the Securities Act, rather than under this prospectus. In effecting sales, broker-dealers engaged by the Selling Securityholders may arrange for other brokers-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the Selling Securityholders (or, if any broker-dealer acts as agent for the purchaser of shares, from the purchaser) in amounts to be negotiated. The Selling Securityholders do not expect these commissions and discounts to exceed what is customary in the types of transactions involved. Broker-dealers may agree to sell a specified number of such shares at a stipulated price per share, and, to the extent such broker-dealer is unable to do so acting as agent for us or a Selling Securityholder, to purchase as principal any unsold shares at the price required to fulfill the broker-dealer commitment. Broker-dealers who acquire shares as

principal may thereafter resell such shares from time to time in transactions, which may involve block transactions and sales to and through other broker-dealers, including transactions of the nature described above, in the over-the-counter markets or otherwise at prices and on terms then prevailing at the time of sale, at prices than related to the then-current market price or in negotiated transactions. In connection with such resales, broker-dealers may pay to or receive from the purchasers such shares commissions as described above.

The Selling Securityholders may from time to time pledge or grant a security interest in some or all of the common shares or Warrants owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the common shares from time to time under this prospectus, or under an amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act of 1933 amending the list of Selling Securityholders to include the pledgee, transferee or other successors in interest as Selling Securityholders under this prospectus.

The Selling Securityholders also may transfer the common shares in other circumstances, in which case the transferees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

The Selling Securityholders and any broker-dealers or agents that are involved in selling the shares may be deemed to be "underwriters" within the meaning of the Securities Act in connection with such

19

sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the shares purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. The Selling Securityholders have informed the Company that none of them have any agreement or understanding, directly or indirectly, with any person to distribute the common shares.

The Company is required to pay all fees and expenses incurred by the Company incident to the registration of the shares. The Company has agreed to indemnify the Selling Securityholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act.

LEGAL MATTERS

NautaDutilh, our Netherlands law counsel, will pass upon the validity of the issuance of the common shares offered by this prospectus.

EXPERTS

The financial statements as of May 31, 2003 and 2002 and for each of the two years in the period ended May 31, 2003 incorporated in this Prospectus by reference to the Annual Report on Form 10-K of Metron Technology N.V. for the year ended May 31, 2003 have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, independent accountants, given on the authority of said firm as experts in auditing and accounting.

The consolidated statement of operations, shareholders' equity and comprehensive income, and cash flows of Metron Technology N.V. and subsidiaries for the year ended May 31, 2001, incorporated by reference herein and in the registration statement have been audited and reported on by KPMG LLP, independent accountants ("KPMG"). Such financial statements have been incorporated by reference herein in reliance upon the report of KPMG, incorporated by reference herein, and upon authority of said firm as experts in accounting and auditing.

INDEMNIFICATION OF NAMED EXPERT

The Company has agreed to indemnify and hold KPMG harmless against and from any and all legal costs and expenses incurred by KPMG in successful defense of any legal action or proceeding that arises as a result of KPMG's consent to the incorporation by reference of its audit report dated July 12, 2001 on the Company's financial statements for the year ended May 31, 2001, and the related financial statement schedule, incorporated by reference herein and in the registration statement.

You should rely only on the information contained, or incorporated by reference, in this prospectus or the registration statement. We have not authorized anyone to provide you with information different from that contained in this prospectus. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of

any sale of common shares.

20

PART II
INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

The expenses in connection with the issuance and distribution of the securities being registered are set forth in the following table (all amounts except the SEC registration fee are estimated):

| | |
|-------------------------|---------------|
| SEC Registration Fee | \$ 1,600.68 |
| Accounting Fees | \$ 25,000.00 |
| Legal Fees and Expenses | \$ 115,000.00 |
| | <hr/> |
| Total | \$ 141,600.68 |
| | <hr/> |

Item 15. Indemnification of Directors and Officers.

Metron has entered into indemnification agreements with certain of its managing directors, providing for indemnification by Metron against any liability to which a managing director may be subject for claims, damages, judgments, losses, liabilities, fees and expenses incurred by them or threatened against them in connection with their performances of services to Metron or its subsidiaries. Metron believes that the indemnification agreements will assist Metron in attracting and retaining qualified individuals to serve as managing directors. The agreements provide that a managing director is not entitled to indemnification under these agreements under certain circumstances including if indemnification is unlawful.

Generally, under Netherlands law, a supervisory director will not be held personally liable for decisions made with reasonable business judgment, absent self dealing or, in the event of bankruptcy, which do not qualify as clearly improper performance. In addition, indemnification may not be available to supervisory directors or managing directors under Netherlands law if any act or omission by a supervisory director or managing director would qualify as willful misconduct or gross negligence (including not taking action to prevent the consequences of improper performance by the board). Due to lack of applicable case law, it is not clear whether indemnification is available in case of breach of securities laws of the United States.

Under the Metron articles, except in case of willful misfeasance, bad faith or gross negligence or improper personal benefit, every person or legal entity who is, or has been, a managing director, supervisory director, or an officer with the power to represent Metron, employee or agent of Metron, who is made a party or is threatened to be made a party to any claim by virtue of such capacity, shall be indemnified by Metron, to the fullest extent permitted under any applicable law against (i) any and all liabilities imposed on him or it, (ii) any and all expenses and (iii) any and all amounts paid in settlement by him or it, in each case in connection with any such claim.

Item 16. Exhibits.

| Exhibit Number | Description of Document |
|-------------------|---|
| 4.1(1) | Investors Rights Agreement dated July 6, 1995 among Metron Technology N.V. and the Investors as defined therein. |
| 4.2(1) | Accession Agreement dated October 15, 1998 among Metron Technology B.V., the Original Parties as defined therein, Segal Investments, L.P., M. Segal, N. Segal, M. Segal as trustee of the Matthew Dean Segal 1997 Trust and N. Segal as trustee of the Matthew Dean Segal 1997 Trust. |

- 4.3(1) Accession Agreement dated July 13, 1998 among Metron Technology B.V., the Shareholders and the Signing Shareholders as defined therein.
- 4.4(2) Subscription Agreement, dated August 25, 2003, by and between Metron Technology N.V. and the purchasers identified therein.
- 4.5(2) Form of 8% Convertible Debenture issued to the purchasers identified in the Subscription Agreement dated August 25, 2003.
- 4.6(2) Form of Common Share Warrant issued to the purchasers identified in the Subscription Agreement dated August 25, 2003.
- 4.7(2) Registration Rights Agreement, dated August 25, 2003, by and between Metron Technology N.V. and the purchasers identified in the Subscription Agreement dated August 25, 2003.
- 4.8(1) Articles of Association of Registrant and translation thereof.
- 4.9(1) Specimen Common Share Certificate.
- 5.1(3) Opinion of NautaDutilh
- 23.1(3) Consent of PricewaterhouseCoopers LLP, independent accountants.
- 23.2(3) Consent of KPMG LLP, independent auditors.
- 23.3(3) Consent of NautaDutilh (included in Exhibit 5.1).
- 24.1(3) Power of Attorney (included in the signature page).

- (1) Incorporated by reference from Metron's Registration Statement on Form S-1 (File No. 333-87665), filed with the Commission on September 23, 1999, as amended through the date hereof.
- (2) Filed as an exhibit to Metron's Form 8-K (File No. 0-27863), filed with the Commission on August 27, 2003, and incorporated herein by reference.
- (3) Filed herewith.

ITEM 17. UNDERTAKINGS.

The undersigned Registrant hereby undertakes:

- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement
 - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act;
 - (ii) To reflect in the prospectus any facts or events arising after the effective date of this Registration Statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in this Registration Statement. Notwithstanding the foregoing, any increase or decrease in the volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may

Edgar Filing: METRON TECHNOLOGY N V - Form S-3

be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering

II-2

price set forth in the "Calculation of Registration Fee" table in the effective Registration Statement; and

(iii)

To include any material information with respect to the plan of distribution not previously disclosed in this Registration Statement or any material change to such information in this Registration Statement;

provided, however, that paragraphs (1)(i) and (1)(ii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed by the Company pursuant to Section 13 or Section 15(d) of the Exchange Act, that are incorporated by reference in this Registration Statement.

(2)

That, for the purposes of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at the time shall be deemed to be the initial *bona fide* offering thereof.

(3)

To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the Registrant's annual report pursuant to Section 13(a) or 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in this Registration Statement shall be deemed to be a new registration statement relating to the securities offered therein and the offering of such securities at the time shall be deemed to be the initial *bona fide* offering thereof.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the indemnification provisions described herein, or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

II-3

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of San Jose, State of California, on September 19, 2003.

METRON TECHNOLOGY N.V.

By: _____ /s/ E. SEGAL

Edward D. Segal
*President and Chief Executive Officer and Managing Director
(Principal Executive Officer)*

POWER OF ATTORNEY

Each person whose signature appears below constitutes and appoints Edward D. Segal and Douglas J. McCutcheon his or her true and lawful attorney-in-fact and agent, each acting alone, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any or all amendments (including post-effective amendments) to the Registration Statement on Form S-3, and to file the same, with all exhibits thereto, and all documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

| Signature | Title | Date |
|---|---|--------------------|
| /s/ E. SEGAL Edward D. Segal | Chief Executive Officer and Managing Director <i>(Principal Executive Officer)</i> | September 19, 2003 |
| /s/ D. J. MCCUTCHEON Douglas J. McCutcheon | Senior Vice President and Chief Financial Officer and Managing Director, Designate <i>(Principal Financial and Accounting Officer)</i> | September 19, 2003 |
| /s/ ROBERT R. ANDERSON Robert R. Anderson | Supervisory Director | September 19, 2003 |
| /s/ JOEL A. ELFTMANN Joel A. Elftmann | Supervisory Director | September 19, 2003 |
| /s/ BRUCE M. JAFFE Bruce M. Jaffe | Supervisory Director | September 19, 2003 |
| /s/ SHO NAKANUMA Sho Nakanuma | Supervisory Director | September 19, 2003 |

II-4

EXHIBIT INDEX

| Exhibit Number | Description of Document |
|-------------------|---|
| 4.1(1) | Investors Rights Agreement dated July 6, 1995 among Metron Technology N.V. and the Investors as defined therein. |
| 4.2(1) | Accession Agreement dated October 15, 1998 among Metron Technology B.V., the Original Parties as defined therein, Segal Investments, L.P., M. Segal, N. Segal, M. Segal as trustee of the Matthew Dean Segal 1997 Trust and N. Segal as trustee of the Matthew Dean Segal 1997 Trust. |
| 4.3(1) | Accession Agreement dated July 13, 1998 among Metron Technology B.V., the Shareholders and the Signing Shareholders as defined therein. |

Edgar Filing: METRON TECHNOLOGY N V - Form S-3

| Exhibit Number | Description of Document |
|-----------------------|--|
| 4.4(2) | Subscription Agreement, dated August 25, 2003, by and between Metron Technology N.V. and the purchasers identified therein. |
| 4.5(2) | Form of 8% Convertible Debenture issued to the purchasers identified in the Subscription Agreement dated August 25, 2003. |
| 4.6(2) | Form of Common Share Warrant issued to the purchasers identified in the Subscription Agreement dated August 25, 2003. |
| 4.7(2) | Registration Rights Agreement, dated August 25, 2003, by and between Metron Technology N.V. and the purchasers identified in the Subscription Agreement dated August 25, 2003. |
| 4.8(1) | Articles of Association of Registrant and translation thereof. |
| 4.9(1) | Specimen Common Share Certificate. |
| 5.1(3) | Opinion of NautaDutilh |
| 23.1(3) | Consent of PricewaterhouseCoopers LLP, independent accountants. |
| 23.2(3) | Consent of KPMG LLP, independent auditors. |
| 23.3(3) | Consent of NautaDutilh (included in Exhibit 5.1). |
| 24.1(3) | Power of Attorney (included in the signature page). |

(1) Incorporated by reference from Metron's Registration Statement on Form S-1 (File No. 333-87665), filed with the Commission on September 23, 1999, as amended through the date hereof.

(2) Filed as an exhibit to Metron's Form 8-K (File No. 0-27863), filed with the Commission on August 27, 2003, and incorporated herein by reference.

(3) Filed herewith.

QuickLinks

[TABLE OF CONTENTS](#)

[METRON TECHNOLOGY N.V.](#)

[USE OF PROCEEDS](#)

[RISK FACTORS](#)

[WHERE YOU CAN FIND MORE INFORMATION](#)

[FORWARD-LOOKING STATEMENTS](#)

[SELLING SECURITYHOLDERS](#)

[PLAN OF DISTRIBUTION](#)

[LEGAL MATTERS](#)

[EXPERTS](#)

[INDEMNIFICATION OF NAMED EXPERT](#)

PART II INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

Item 15. Indemnification of Directors and Officers.

Item 16. Exhibits.

ITEM 17. UNDERTAKINGS.

SIGNATURES

POWER OF ATTORNEY

EXHIBIT INDEX